Phase I
Tacoma Waterfront Analysis

Ruston Way-Schuster Parkway-City Waterway

Tacoma Planning Department

June 1988

City of Tacoma

Planning Department

1983-84 ALL-AMERICA CITY

July 14, 1988

Mr. Steve Craig
Department of Ecology
Shorelines Division
Mail Stop PV-11
Olympia, WA 98504

Dear Mr. Craig:

Enclosed are five copies of the Project Completion Report and Parametrix, Inc.'s reports - Tacoma Waterfront Analysis - Phase I and Phase II for contract G0088015.

Should you have any questions, please call Mike Smith of this department.

Sincerely,

George A. Hoivik

GEORGE A. HOIVIK
Acting Director of Planning

GAH:vg

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PROJECT COMPLETION REPORT
July 1, 1987 - June 30, 1988
Coastal Zone Planning Assistance Program
Contract No. G0088015

The preparation of this report was financially aided through a grant from the Washington State Department of Ecology with funds obtained from the National Oceanic and Atmospheric Administration and appropriated for Section 306 of the Coastal Zone Management Act of 1972.

CITY OF TACOMA

REVIEW AND ANALYSIS OF CRITICAL WATERFRONT ISSUES

The City of Tacoma Coastal Zone Management Grant involved a comprehensive review of the City of Tacoma's shoreline district, with detailed primary emphasis on the "S-6" Ruston Way, "S-7" Schuster Parkway, and "S-8" City Waterway shoreline districts, within the context of overall shoreline management goals. These districts, because of their urbanized nature and development pressures, have the greatest potential for conflict.

Because of the expediency desired to develop a resolution to the issues, the project involved the use of a consultant to conduct technical research and environmental analysis. The time pressures generated by intense public interest in the shoreline at this time, required an immediate response not possible with existing staff level.

The primary role of the consultant was to perform specific tasks such as data collection, economic trends and analysis, identification of recommended actions, and assist in necessary environmental analysis. Planning staff was responsible for the public input and review process.

The project was divided into two phases. Phase I consisted of a technical review and analysis of existing information and conditions, identification of additional issues, and identification of additional appropriate and reasonable shoreline uses. Phase II involved the formulation of conclusions and recommendations for Master Program amendments and other appropriate actions.

Initial work on the project involved development of a Request for Proposal (RFP) for consulting services. On August 10, 1987, this RFP was advertised and distributed to 43 consulting firms. Four proposals were received. One of these was later withdrawn.

An interview committee was formed to review the proposals and interview the consultants. Following all of the interviews, the committee's recommendations were forwarded to the City Council for final ratification. Following their approval, a contract was negotiated with the firm of Parametrix, Inc.

The consultant initiated Phase I of the study during the month of November. Phase I consisted of a technical review and analysis of existing information and conditions.

The consultant team reviewed plans, policies and regulations applicable to the shoreline, and, in particular, to the "S-6" Ruston Way, "S-7" Schuster Parkway, and "S-8" City Waterway Shoreline Districts. These documents were used by the consultants to evaluate previously identified issues of concern.

To identify other possible issues of concern, the consultant team developed a questionnaire and held interviews with interested members of the City Council and Planning Commission. In addition, the consultants discussed issues with members of the City Planning and Community Development Departments, and representatives from the Port of Tacoma and from the State Department of Ecology. The consultant also met with representatives from the Chamber of Commerce, the Economic Development Board, neighborhood and environmental groups.

City project staff participated in a panel on the future of the waterfront for a civic luncheon. Other panelists were a City Council member, a citizen active in shoreline issues and a shoreline property owner/developer. Presentations were also made to the National Systems Citizen Advisory Committee and the Planning Commission concerning the study.

The consultant team reviewed maps, aerial photographs and conducted field trips to determine uses and activities along the shoreline. Assessor records, the shoreline permit history and other related data were also reviewed. City project staff provided assistance and direction, as necessary.

The information collected was entered into a computer data base and reports were generated. The reports categorize the existing land uses, document changes in use since 1962, and account for acreage involved and ownership. From this data, major sections of Phase I were prepared, including the Land Use Inventory and Trend Analysis. In addition, a data base was developed from permit activity information and an analysis prepared for the Phase I report.

To identify possible constraints to development, the project team investigated the parking situation, transit and access to the area and the availability of utilities. Environmentally sensitive issues were appraised through review of existing documents, including the Commencement Bay Study prepared by the U. S. Army Corps of Engineers and the Commencement Bay Nearshore/Tideflats Remedial Investigations prepared by Tetra Tech for the Department of Ecology and the Environmental Protection Agency. An economic report was also generated to develop a realistic appraisal of the current market demand for various uses in the area and reasonable projections for future demands or changes in waterfront utilization.

The data and reports were reviewed by City project staff and some changes were necessary to accommodate corrections and new information. The consultant finalized the Phase I report and City project staff provided the Tacoma Planning Commission with summaries of the completed work at regular Planning Commission meetings.

Development of Phase II - formulation of conclusions and actions began with a review of pertinent regulations in light of the Phase I information. In addition, the consultant met with Osborn and Ray, the subconsultant firm that reviewed the public access and view corridor regulations. A series of issues, problems and concerns were developed and considerable discussion occurred between the City project staff and the consultants. As a result, a series of conclusions were developed and recommendations made for adding specifically to Tacoma's Shoreline Master Program.

Both phases of the grant have been completed. The Phase I study provides background information on the character of the shoreline and draws conclusions about appropriate development possibilities. The Phase II study includes recommendations on how the City of Tacoma can encourage appropriate development and address specific issues of concern.

Both Phase I and Phase II follow basic guidelines recommended in Urban Waterfront Policy Analysis, issued by the Washington State Department of Ecology. Phase I lays the foundation for a comprehensive waterfront plan. Phase II provides insight into the concerns which have been raised by citizens and recommendations for resolving them. Both elements are now ready to be introduced into the public process. The final product, once approved by city officials, will be a comprehensive waterfront plan, a management strategy for the shoreline, and a set of action-oriented goals and commitments.

ABSTRACT

Title: Tacoma Waterfront Analysis, Phase I and Technical Appendices

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Subject: Ruston Way, Schuster Parkway, City Waterway Shoreline Districts

Date: June 1988

Prepared For: City of Tacoma, Planning Department

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Project Number: G0088015

Number of Pages: 175 (287 including technical appendices)

Abstract:

Tacoma Waterfront Analysis, Phase I is the first of two study documents that examine Tacoma's three urbanized shoreline districts; Ruston Way, Schuster Parkway and City Waterway. The Phase I portion provides background information on the character of these shoreline districts and draws conclusions about appropriate development possibilities.

Phase I describes current land uses and quantifies acreage in general use categories. It also examines past land uses for the last 25 years. The document analyzes the types of development approved since the 1971 Shoreline Management Act and also looks at approved projects that were never constructed. The three waterfront districts were also analyzed to determine their suitability for a range of water-dependent or water-related uses.

The Phase I report focused on reasons why development is or is not taking place on the three subject shorelines. Factors considered included regulatory requirements, environmental issues, physical limitations, problems with parking, barriers to pedestrian access and limitations of the public transit system.

The final analysis in Phase I concerns the overall economic climate. The economic report examines development trends and looks ahead at potential opportunities for the future of the shoreline.

The Phase 1 report serves as a base of information for the Phase II document which includes conclusions and recommendations on how the City of Tacoma can encourage appropriate shoreline development and address specific issues of concern.

The Tacoma Waterfront Analysis, Phase I, Technical Appendices is six separate appendices consisting of:

1. Applicable Tacoma Master Program for Shoreline Development policies and regulations
2. 1987 Land Use Inventory
3. 1962-1987 Land Use Trends
4. Land Use Acreage
5. Shoreline Substantial Development Permit History
6. Suitability Analysis for Water-Dependent and Water-Related Uses

Each appendix supplies technical information on Tacoma's three urbanized shoreline districts; Ruston Way, Schuster Parkway and City Waterway. The information was used to develop both the Phase I and Phase II accompanying reports.

PHASE I

TACOMA WATERFRONT ANALYSIS

RUSTON WAY - SCHUSTER PARKWAY - CITY WATERWAY

June 1988

Prepared for:

CITY OF TACOMA
DEPARTMENT OF PLANNING

Prepared by:

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The preparation of this study was financially aided through a grant from the Washington State Department of Ecology with funds obtained from the National Oceanic and Atmospheric Administration and appropriated for Section 306 of the Coastal Zone Management Act of 1972.

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EXECUTIVE SUMMARY

Phase I is the first of two studies that examine the Tacoma waterfront from the Town of Ruston south to City Waterway. The Master Program for Shoreline Development divides the shoreline into three segments: Ruston Way, Schuster Parkway, and all of City Waterway except the east side north of S 15th Street. It is an area that has been in transition since the early part of the century and many concerns have been raised regarding the course of future development. The Phase I study provides background information on the character of the shoreline and draws conclusions about appropriate development possibilities. The Phase II study includes recommendations on how the City of Tacoma can encourage appropriate development and address specific issues of concern.

Both Phase I and Phase II follow basic guidelines recommended in Urban Waterfront Policy Analysis, issued by the Washington State Department of Ecology. Phase I lays the foundation for a comprehensive waterfront plan. Phase II provides insight into the concerns which have been raised by citizens and recommendations for resolving them. Both elements are ready to be introduced into the public process. The final product, once approved by city officials, will be a comprehensive waterfront plan, a management strategy for the shoreline, and a set of action-oriented goals and commitments (Figures A and B).

THE FORMAT OF PHASE I

Phase I of the Tacoma Waterfront Analysis looks at the Ruston Way, Schuster Parkway and City Waterway shorelines from a number of different perspectives. First, it describes current land uses and quantifies acreage totals in general use categories. The incidence of vacant land and ownership patterns are also taken into account. Second, Phase I examines past land use practices. Historical information and a more detailed land use inventory

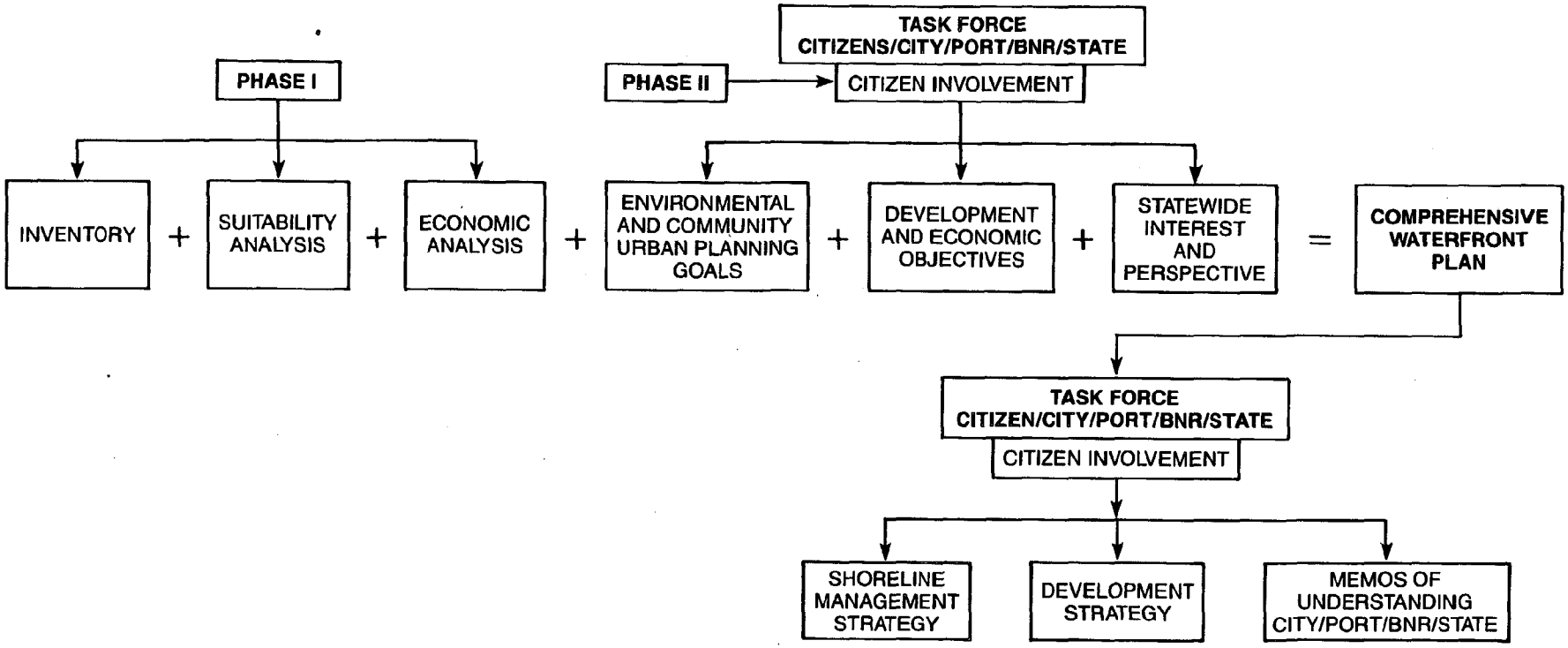


Figure A.
Tacoma Urban Waterfront Analysis Planning Process

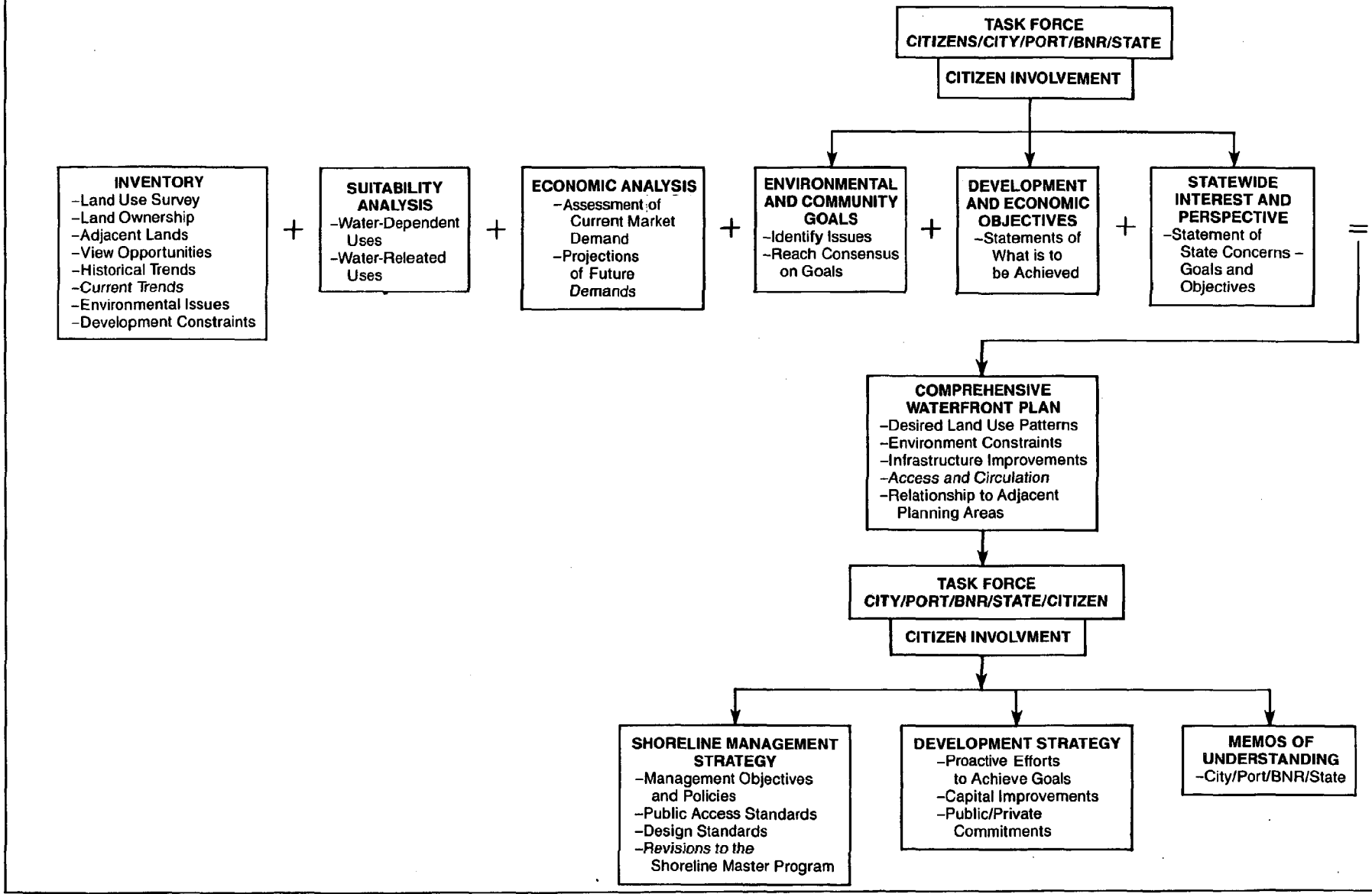


Figure B.
Tacoma Urban Waterfront Analysis Planning Elements

covering the last 25 years are used to determine how the shoreline has changed and what trends have emerged.

The third perspective is another approach to trend analysis that examines issuance of shoreline permits. The kinds of development approved since the Shoreline Management Act went into effect in 1971 highlight the development trends in the area. Equally instructive, however, is determining which developments were approved but never constructed. This information gives some insight into what is not happening on a particular segment of shoreline and provides a means for tracking down the causes.

Subsequent sections of Phase I focus on the reasons development is or is not currently taking place on the Ruston Way, Schuster Parkway, and City Waterway shorelines. The waterfront is analyzed to determine its suitability for a range of water-dependent and water-related uses. A water-dependent or water-related use is one that requires a waterfront location. The Tacoma Shoreline Master Program also defines a water-related use as one the provides an opportunity for a substantial number of people to enjoy the shoreline.

If a shoreline is not suitable for a particular waterfront activity, this may be the overriding reason why such development has not taken place. On the other hand, there may be additional factors at work, affecting all potential development. Phase I examines other possible factors including, issues of environmental concern, problems with parking, barriers to pedestrian access and limitations in the public transit system. It also considers the regulatory framework within which all shoreline development must take place.

The final analysis in Phase I concerns the overall economic climate, both past, present, and future. It examines development trends and the reasons some activities have ceased while others have been successfully introduced. The economic report also looks ahead at potential opportunities and concludes that the Ruston Way, Schuster Parkway, and City Waterway shoreline segments could play a role in Tacoma's future.

HOW THE WATERFRONT HAS CHANGED OVER TIME

The trend analysis shows there has been a long period of decline in traditional waterfront uses of the shoreline. The decline is documented for industrial activities as well as shipping enterprises. To a large extent, these former uses were resource-based industries, including: lumber mills, log rafting operations, granaries, a flour mill, coal bunkers, plywood and press board manufacturers, a smelter, an electroplating company and foundries. In addition, a number of ship building operations have creased operation.

The analysis shows that the decline in shipping activities involved closures of warehouses, freight forwarding operations, and tug and barge terminals. On Ruston Way, there was also a decline in marinas and boating services. Over the same period, a number of these uses located in City Waterway. One tentative conclusion is that marinas were unable to compete successfully for prime locations within City Waterway when profitable industries and shipping interests were present. Once these activities moved out marinas were able to relocate from the less than suitable (exposed) Ruston Way shoreline to protected moorage in City Waterway

The decline in resource-based industries along the Ruston Way, Schuster Parkway and City Waterway shoreline can be partly accounted for by general changes in Tacoma's economy. Some industrial uses, however, did relocate to the Port of Tacoma. This was particularly true of many of the shipping interests. The Port's reclaimed tideflats offer many amenities including protected waterways with sufficient depth, rail and truck access, modern technologies, adequate land area, and compatible land uses.

THE WATERFRONT TODAY

The result of this decline in industrial and shipping-related activity along Ruston Way, Schuster Parkway, and City Waterway is a shoreline considerably different from the early Tacoma waterfront. On Ruston Way, parks, restaurants, and professional office complexes have located in areas that

once supported lumber mills, boat building operations, and marinas. None of the former industrial and commercial water-dependent or water-related uses remain.

On City Waterway, unlike Ruston Way, a few industrial uses remain. These activities are, for the most part, nonwater-dependent. However, the character of City Waterway has been slowly changing as marinas move into areas previously occupied by industrial water-dependent and water-related uses. Marinas and boating services now occur where log rafting, manufacturing, and shipping interests once operated. There is also a multiple use professional office complex situated in a warehouse that once stored goods delivered by ship and barge.

Schuster Parkway still retains attributes of a working waterfront, with a grain elevator and large vessel moorage. The available deep-draft moorage has been, and continues to be, an asset of this waterfront that is still in demand. However, the recent closure of a longstanding feature of this shoreline, Tacoma Boat Builders, has contributed to the overall trend away from industrial water-dependent uses.

VACANT LAND

In spite of the introduction of new uses, the incidence of vacant land remains high. On Ruston Way, there are 54 acres of vacant waterfront property. On Schuster Parkway there are 31 acres and on City Waterway, 12 acres. The combined total of vacant shoreline frontage associated with these parcels is 13,685 vacant waterfront feet, or 50 percent of the shoreline within the study area.

The vacancy figure for Ruston Way is particularly high because of the recent closure of the ASARCO operation. If the ASARCO site is not factored into the analysis, Ruston Way would have 20 acres of vacant land, approximately the same number of vacant acres recorded in the years between 1962 and 1982. Therefore, south of ASARCO, the development of parks and restaurants along

Ruston Way has occurred at approximately the same rate at which properties have become vacant.

On Schuster Parkway and City Waterway infilling with new uses has occurred more slowly in relation to the rate at which properties become vacant. Since the introduction of the grain elevator on Schuster Parkway, which occupied a great deal of previously vacated land, Tacoma Boat discontinued its operation, increasing the quantity of vacant land from 22 to 31 acres. On City Waterway, the amount of vacant land has increased from four acres in 1962 to 12 acres in 1987.

The reasons for the high incidence of vacant land differ between shoreline segments and in some cases from site to site.

Reasons for Vacant Land on Ruston Way

As stated previously, the Port of Tacoma has successfully attracted most of the area's viable industrial water-dependent and water-related uses and shipping interests. This is one of the contributing reasons for the decline of such activities along Ruston Way, and it continues to be an influence.

The suitability analysis confirmed that Ruston Way is not the preferred location for many industrial and commercial uses that require a waterfront location. To begin with, a number of such uses are incompatible with residential development. Thus, potentially suitable industries, including cargo terminals, water-related manufacturing, shipbuilding, and possibly fish processing, would not be appropriate along Ruston Way where residential developments overlook the shoreline. In addition, water-dependent and water-related industrial uses typically require a substantial amount of upland area, which means that in order to locate on Ruston Way expensive construction techniques such as landfilling or pilings would be required. Even if the compatibility issues could be resolved and dry land area requirements could be satisfied, lack of rail access to most of the Ruston Way shoreline would pose a constraint for some industrial activities.

The exposed Ruston Way shoreline poses additional siting problems for water-dependent and water-related uses that involve small vessel moorage, such as tug and barge terminals and recreational boating. Normally, waves approaching from the north are less than one foot high. However, when storm winds occur from this direction, waves as high as five feet have been recorded. Under such rare, but extreme conditions, unprotected moorage could be at risk.

In summary, the suitability analysis concludes that the constraints imposed by the proximity of residential areas, an exposed shoreline and lack of rail access make Ruston Way a less than suitable location for many water-dependent or water-related uses. The expense and environmental constraints associated with landfilling or piling construction is another deterrent. If compatibility issues could be resolved, a few sites, including the ASARCO property have sufficient dry land area, and would be otherwise suitable for some water-dependent and water-related activities which do not need protected moorage. If rail access is required, only the ASARCO property would be suitable.

While the ASARCO property has potential as a site for industrial water-dependent and water-related uses, it is not likely to be redeveloped in the immediate future. Past industrial practices have seriously contaminated the area and it is currently the subject of Superfund cleanup efforts. Redevelopment will have to await the conclusion of these studies and subsequent site stabilization. Until then, the property will remain vacant.

Properties on the Ruston Way shoreline, south of ASARCO, are not the subject of such serious environmental concern. However, the shoreline regulations prohibit any new industrial development as well as residential uses in this area. Therefore, only water-related activities which provide an opportunity for a substantial number of people to enjoy the shoreline and nonwater-dependent uses (other than residential) are likely candidates for redevelopment of vacated properties.

The primary problem in siting nonwater-dependent developments on Ruston Way is the lack of upland area. Current shoreline regulations will only permit landfill and construction on piling for water-dependent and water-related uses. Nonwater-dependent uses (such as office buildings or retail commercial) are not allowed seaward of existing dry lands. Since most of the Ruston Way shoreline parcels do not have enough dry land to support a nonwater-dependent use and required parking, these types of developments are not proposed.

Two uses that have been successful in gaining permit approval on Ruston Way have been parks and restaurants. Landfill and over-the-water construction in both cases could be approved because the Tacoma Shoreline Master Program defines these uses as water-related since they provide an opportunity for a substantial number of people to enjoy the shoreline.

An additional factor which may be affecting the status of the vacant properties along Ruston Way is the fact that growth in the retail and service sectors of the economy has been slower in Pierce County than adjacent counties. Lack of consumer demand for retail goods and services has dampened investor interest, especially in the few areas along Ruston Way which do have adequate dry land area and could have supported such non-water dependent uses. Housing starts have not been as depressed, and it is possible that if residential uses were permitted along Ruston Way those properties which do have some dry land area would have been developed.

Reasons for Vacant Land on Schuster Parkway

Economic slowdowns in the retail and service sectors of the economy may also be at least partially responsible for the incidence of vacant land along Schuster Parkway. Since the closure of Tacoma Boat Builders, two shoreline permits have been approved for the site: one for a waterfront hotel and another for an office complex. Neither project was ever developed and it is generally believed that economic factors were primarily responsible. The construction of major downtown hotels may have saturated the market and there has been a surplus of office space in the Tacoma area.

It should be noted that Schuster Parkway does have some fairly large associated upland areas available for development. Unlike Ruston Way, nonwater-dependent development would not be as severely constrained by regulations prohibiting land filling or piling construction for these types of uses. In addition, the regulations do permit industrial development along this portion of the shoreline. Therefore, the lack of such developments must be attributed to other causes.

Factors that may contribute to the incidence of vacant land on Schuster Parkway are the proximity of residential neighborhoods and the exposed shoreline. As discussed previously for Ruston Way, both of these shoreline characteristics place limitations on a number of water-dependent and water-related uses. Cargo terminals, water-related manufacturing, fish processing, tug and barge moorage, and even shipbuilding would probably not be compatible with nearby residential uses. Marinas which can be compatible with residential neighborhoods are not suited to this exposed shoreline.

Reasons for Vacant Land on City Waterway

In contrast to Ruston Way and Schuster Parkway, the protected conditions in City Waterway are ideal for small boat moorage. Therefore, it is not surprising that new moorage facilities have been developed in some areas vacated by industrial and shipping-related interests. However, the introduction of recreational boating activities has not been able to keep pace with the rate at which land becomes vacant. In fact, there is some speculation that the marina market may be saturated at this time, since a major marina proposal was permitted but never developed for lack of investor interest.

Other uses have been slow to locate on City Waterway. Those that have, include a restaurant associated with a marina, a scaffolding company, a multiple use office development and a city park. Reasons for the overall lack of developer interest are many and complex.

The suitability analysis shows that the south half of City Waterway is too shallow for a number of water-dependent and water-related uses, but the north half could support deep-draft shipping and industrial activities that require a shoreline location. Since existing shoreline regulations do not permit industrial activities on this segment of waterfront, new developments of this nature cannot be presently approved. However, uses involving the docking of large vessels could be permitted. The fact that such uses have not occurred is due in large part to the success of the Port of Tacoma.

There are physical constraints, regulatory factors, and an apparent lack of demand preventing the development of many industrial water-dependent and water-related uses and shipping interests along City Waterway. There also appear to be issues inhibiting the introduction of nonwater-dependent uses and water-related activities which provide an opportunity for people to enjoy the shoreline. Office buildings, multi-residential units, retail outlets, commercial services and restaurants are not prohibited by the shoreline regulations; yet for the most part they too have failed to locate on City Waterway.

The availability of upland area is not a problem on City Waterway as it is on Ruston Way. Therefore, most nonwater-dependent uses could locate on the waterfront without the need for landfill or piling construction. It appears that in some instances environmental concerns are the limiting factor.

There is some evidence that upland sites may have been contaminated by past industrial practices. For example, recent excavations for SR 705, in the vicinity of City Waterway, uncovered tar-pits from the former coal gasification plant and there is reason to believe residue from this plant was also deposited along the shoreline at the end of City Waterway. A number of other sites are similarly suspect. Clean-up expenses can run into the millions of dollars. Such front-end costs are likely to deter development interest.

There are also other environmental factors that create an unappealing setting for nonwater-dependent uses. These factors include ongoing Superfund efforts to clean up the toxic sediments in City Waterway and air quality degradation

caused by adjacent industrial activity. In addition, the dilapidated condition of vacated properties and the persistence of a few industrial uses along the waterway mitigate against the introduction of offices, multi-residential uses, retail outlets and restaurants.

While environmental concerns and substandard conditions tend to discourage the introduction of new businesses along City Waterway, the fact that the waterfront is isolated from the central business district acts as another deterrent. Nonwater-dependent uses and uses which provide an opportunity for the public to enjoy the shoreline would have more incentive to locate on City Waterway if it were integrated with the downtown shopping area.

The economic factors affecting the Tacoma area as a whole can also be assumed to be a factor in the incidence of vacant land on City Waterway. Tacoma has experienced little growth in the retail and service sectors of the economy. Therefore, there has been little incentive for redevelopment of transitional areas such as City Waterway.

ECONOMIC FORECASTS AND FUTURE PROSPECTS

Economic forecasts to the year 2000, show that there may be reason for cautious optimism. Tacoma is expected to grow as an employment center, attracting more and more people to the area. The influx should provide support for daytime retail businesses and incentive to revitalize areas like City Waterway. Interestingly, the economic forecasts only project a 2 percent increase in population growth for Tacoma. In other words, while employment opportunities in Tacoma will increase (at rates between 17 and 24 percent), few people will live in town, choosing instead to commute from outlying areas.

City Waterway could play a unique role in reversing this pattern. A revitalized waterfront in conjunction with redevelopment of the downtown area could attract a segment of the population seeking to live in dynamic urban centers. If a strong residential component is established in the downtown area there will be greater support for retail outlets and services. An active program

to resolve the pollution issues on City Waterway and the construction of linkages between the shoreline and downtown Tacoma would improve the chances of a successful downtown revitalization effort.

Economic forecasts also predict regional growth in the travel and tourist industries. Ruston Way, Schuster Parkway, and City Waterway could play a unique role in capturing a portion of this business. Revitalized urban shorelines can become focal points for tourists, as evidenced by some notable West Coast examples, including San Francisco, California; Portland, Oregon; Seattle, Washington; and Granville Island in Vancouver, British Columbia. Given the large amount of vacant land on the Tacoma waterfront, tourist-oriented businesses would be able to locate there without displacing existing uses. In this sense, a unique opportunity exists for capturing an upward swing in the economy.

The economic opportunities for Ruston Way, Schuster Parkway and City Waterway appear to be in the direction of people-oriented businesses. Water-dependent and water-related uses that could occur in this setting include recreational boating activities, harbor tours, and ferry and cruise ship terminals as well as activities which allow the public to enjoy the shoreline. One significant conclusion in the suitability analysis was that Ruston Way, Schuster Parkway and the north half of City Waterway have all the locational requirements for a cruise ship terminal.

In conclusion, although there are some existing constraints to development along Ruston Way, Schuster Parkway, and City Waterway, there is reason to believe there are workable solutions. If a reasonable approach is taken to the limitations of the area and development is geared toward appropriate markets, it is likely that Ruston Way, Schuster Parkway, and City Waterway could fulfill a new and important role in the future of Tacoma.

Section I:
Introduction

SECTION I

INTRODUCTION

PURPOSE

Tacoma's Master Program for Shoreline Development (Master Program) was adopted in December 1976 as an element of the City's long-range, comprehensive Land Use Management Plan. It is the primary tool for regulating waterfront development. Recently, several concerns surfaced regarding the regulations as applied to a stretch of shoreline running from the Town of Ruston to City Waterway (Figure 1). In the Shoreline Master Program this 6.2 miles of shoreline is broken into three segments: Ruston Way, Schuster Parkway and City Waterway (Figure 2). The concerns were voiced by different segments of the community, including property owners, developers, elected officials, and citizens.

In response, the City of Tacoma sponsored a public forum in November, 1986. A panel composed of federal, state and local shoreline regulatory agency representatives participated in the forum. A number of issues were raised at this forum concerning such diverse subjects as height limits, permitted uses, public access, parking, and shoreline district boundaries. The Planning Commission was directed by the City Council to further review these issues and others as identified, and propose recommended actions which could include amendments to the City's Master Program.

It is the purpose of this study to carry out the objectives of the City Council. The report addresses the Ruston Way, Schuster Parkway and City Waterway shorelines and is presented in two parts. Phase I provides background information which describes the study area, analyzes land use and economic trends, and evaluates the potentials and development constraints of each waterfront segment. Phase II presents the issues that have generated concern in the community and provides recommendations for resolution.

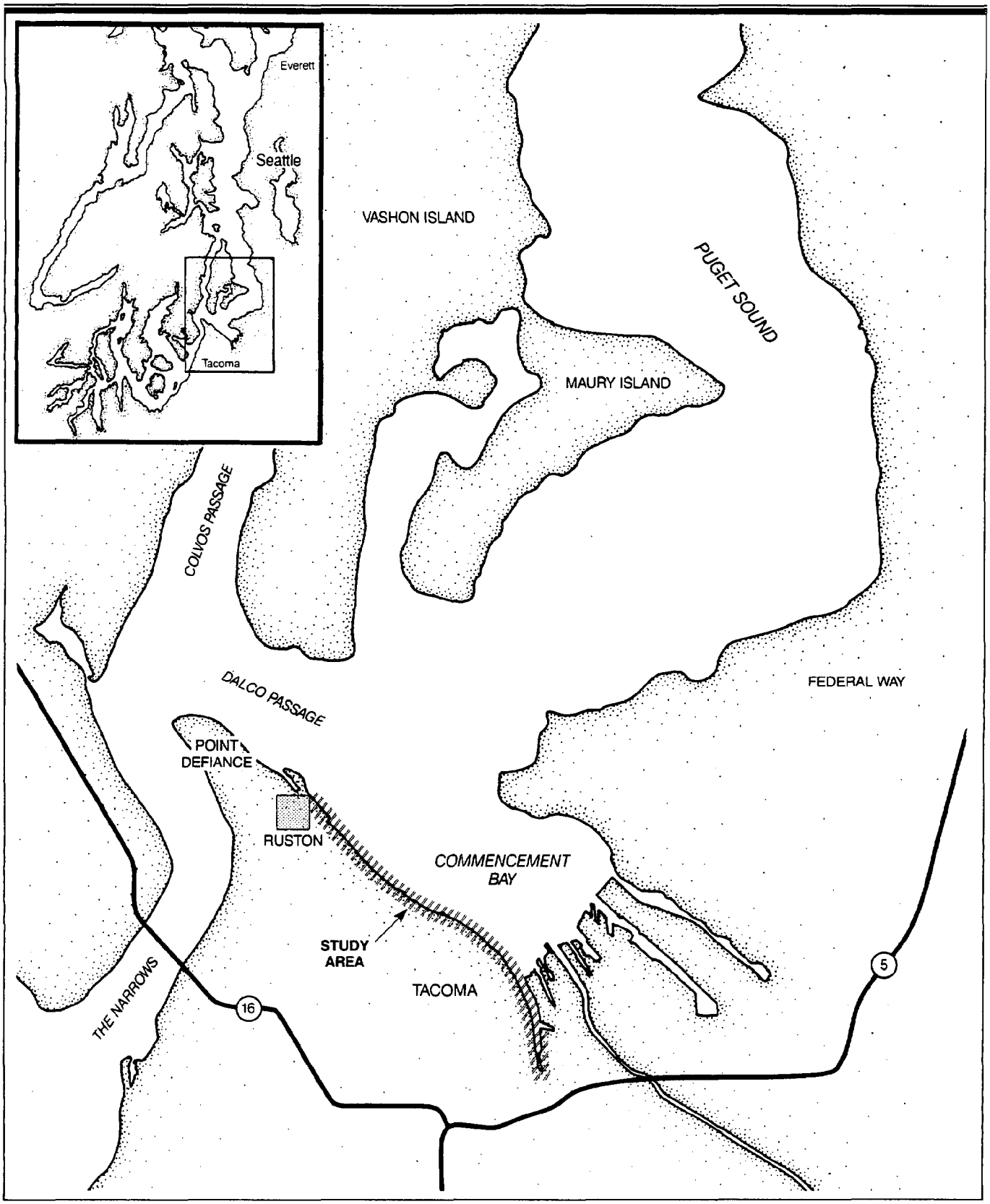


Figure 1.
Vicinity Map

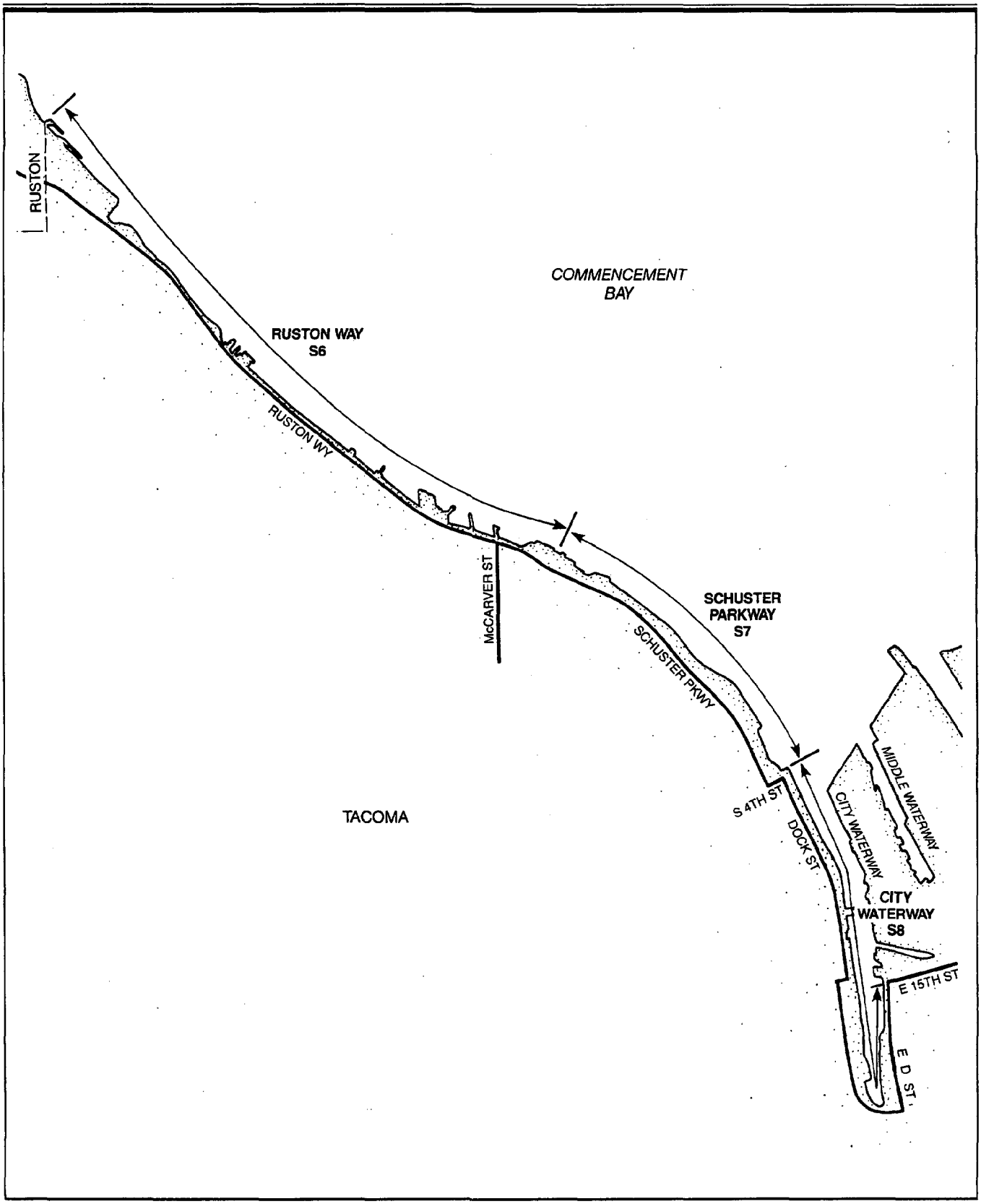


Figure 2.
Shoreline Segment Map

Together, Phase I and Phase II can be used to develop a comprehensive waterfront plan and a management strategy for the Tacoma Shoreline.

BACKGROUND INFORMATION

An understanding of some basic shoreline terminology and of the plans and policies which apply to the study area will assist the reader in the following analysis. For example, throughout the Phase I and Phase II reports there is reference to the terms water-dependent and water-related. These concepts have special relevance in shoreline planning and nearly all permit evaluations in an urban area hinge on whether a use actually requires a waterfront location. In addition, the analysis must be viewed against the background of existing plans and regulations. What follows is a discussion of the terms water-dependent and water-related and a brief overview of the planning documents and ordinances which have been adopted to guide development in shoreline locations.

DEFINITIONS AND RELEVANCY OF WATER-DEPENDENT AND WATER RELATED USES

The Master Program defines a water-dependent use as follows:

> "Water-dependent use" means a use which cannot logically exist in any other location but on the shoreline and is dependent upon the water by reason of the intrinsic nature of its operation. Examples would include, but not be limited to, the following:
>
> 1. Use activities which provide a transportation service to other industries or the general public;
>
> 2. Use activities which provide for construction, repair, maintenance, servicing and dismantling of watercraft;
>
> 3. Aids to navigation which serve more than a single user;
>
> 4. Marinas and boat launch facilities;

5. Dockside fishing facilities;

6. Moorage facilities - permanent/transient.

Uses which are considered water-dependent under usual conditions include: cargo terminal loading areas; ferry and passenger terminals; barge loading facilities; building, repair, servicing and dry docking of ships; aquaculture; float plane sheds; tugboat services; log booming; towboat operations; marinas; and, sewer outfalls.

The Master Program defines water-related uses as follows:

"Water-related use" means a use which is not intrinsically dependent upon a waterfront location but whose location on or near the waterfront will facilitate its operation or will provide increased opportunity for general public use and enjoyment of shorelines and shoreline areas. Examples would include, but not be limited to, the following:

1. Use activities which do not service others but do require water transport, usually of raw materials.

2. Commercial - marine
   a. Restaurants
   b. Boat sales/supplies
   c. Fish markets
   d. Scuba, skin-diving, fishing sales/supplies
   e. Other commercial uses which provide increased opportunities for general public use and enjoyment of shoreline areas.

3. Marine recreation:
   a. View and observation areas
   b. Trails and pathways
   c. Yacht clubhouses, meeting areas, and related uses

4. Marine-related educational or scientific uses.

It should be noted that the Tacoma Master Program definition of water-relatedness is more inclusive than the definition provided by the state. The state definition only recognizes uses as water-related if they cannot occur economically without a shoreline location. It does not include uses which provide the public an opportunity to enjoy the shoreline. Thus, the state definition would not consider restaurants or clubhouses to be water-related.

The concept of water-dependency and water-relatedness is an integral part of shoreline planning. It is well recognized that many uses compete for a shoreline location. There are commercial interests that could realize a higher rate of return if permitted to build residential units, office buildings, restaurants or retail establishments on the waterfront. There is the public that values the shoreline for recreation and open-space. There are also environmental concerns seeking to protect wildlife areas and marine ecosystems. All of these demands can compete with uses that must have a shoreline location if they are to operate economically or operate at all (i.e. water-dependent or water-related activities).

Past experience has shown, that if unregulated, nonwater-dependent uses and uses which provide the public an opportunity to enjoy the shoreline will dominate waterfront locations. Some examples include residences, office buildings, retail establishments, and restaurants. These uses are less susceptible to market fluctuations and frequently out-compete other interests for a shoreline location. Once established, such uses tend to persist. The concern is that future options for water-dependent and water-related uses may be pre-empted.

The Shoreline Management Act recognized the need to preserve shoreline areas for uses which are intrinsically dependent on the water. In the carefully crafted opening paragraphs of this legislation it states: "To this end, uses shall be preferred which are consistent with control of pollution and

prevention of damage to the natural environment or are unique to or dependent upon use of the state's shorelines." (90.58.020 RCW)

Giving priority to water-dependent and water-related uses and reserving significant portions of urban shorelines for these activities, remains an important goal both statewide and at the local level. The Master Program, which carries out the mandate of the Shoreline Management Act, has many elements which grant preferred status to water-dependent and water-related uses. Under the policies for Economic Development it states:

> Nonwater-dependent industries presently occupying shoreline locations should be encouraged to locate to non-water back up sites.

Specific policies in the Master Program for Commercial Development and Port and Water Related Industry also give priority to water-dependent and water-related uses.

Commercial Development

Although many commercial developments benefit from a shoreline location, priority should be given to those commercial developments which are particularly dependent on their location, and or use of the shorelines of the state and other development that will provide an opportunity for substantial numbers of people to enjoy the shoreline of the state. Only by exception should nonwater-related developments be put on the waterfront.

Port and Water Related Industry

Water-dependent terminal commercial and industrial uses shall be given priority for location in designated shoreline industrial areas. Careful planning, must be undertaken to reduce adverse impacts of industrial docks, and piers and other water-dependent uses and shoreline resources.

The way in which the Master Program gives priority to water-dependent and water-related uses is to grant these activities preferred status in the regulations. For example, landfill can only be permitted for a water-dependent or water-related activity. Also, water-dependent or water-related uses are not subject to more stringent levels of review. On Ruston Way for example, commercial water-dependent uses are considered a permitted use on uplands and over-the-water. This does not mean that they are permitted outright. A shoreline substantial development permit is still required, but it is not subject to special consideration or conditional use criteria. Also on Ruston Way, commercial water-related uses can be permitted on piers as a conditional use, but nonwater-dependent activities must be confined to the uplands. Only if there is no other reasonable use of the property can a nonwater-dependent use be allowed over-the-water on Ruston Way.

Regulations for shoreline development on Schuster Parkway and City Waterway are similarly favorable to water-dependent and water-related uses. In both shoreline areas commercial water-dependent and water-related activities are considered permitted uses. On Schuster Parkway industrial activities which require a shoreline location are also considered a permitted use.

All shoreline management in the State of Washington must plan for and protect water-dependent and water-related interests. For this reason, much of the subsequent analysis deals with issues of water-dependency and water-relatedness on the subject shoreline.

REGULATORY FRAMEWORK

An understanding of the issues that have been raised, requires an understanding of the policies and regulations affecting shoreline development in Tacoma. At the local level, several plans are in place which provide a vision and a framework for development decisions. For Ruston Way, Schuster Parkway and City Waterway the following plans apply: the Master Program for Shoreline Development and the Land Use Management Plan, particularly the Generalized Lane Use Plan. Specific plans have also been developed, portions of which address individual shoreline segments. These include; the Ruston

Way Plan; the Westside Plan; the North Slope Plan; and the Central Business District Plan.

The following discussion summarizes the major policies and provisions of the above stated plans. The intent is to provide the reader with a brief overview of the regulatory framework as well as the conceptual rationale which underlies shoreline planning efforts.

MASTER PROGRAM FOR SHORELINE DEVELOPMENT

The Master Program was adopted in 1976. It was developed in accordance with the requirements of the Shoreline Management Act (1971) and the Washington Administrative Code Guidelines provided by the Department of Ecology. The Master Program regulates the use of shoreline areas which fall within 200 feet of designated waterbodies.

The Master Program has two parts:

1. A Shoreline Plan which includes shoreline management goals, policies, maps, diagrams, charts, inventory and other descriptive material and text.

2. A Shoreline Ordinance (Chapter 13.10) which includes shoreline segment designations, use regulations and permit procedures to implement the shoreline plan.

It is the established goal of the Master Program to:

> "Develop the full potential of Tacoma's shoreline in accord with the unusual opportunities presented by its relation to the city and surrounding area, its natural resources values, and its unique aesthetic qualities offered by water, topography, views, and its maritime character; and to develop a physical environment which is both ordered and diversified and which integrates water, shipping activities and other shoreline uses with the structure of the city."

Policies designed to achieve this goal are directed at public acquisition of shorelines pursuant to establishing a "logical pattern" of public ownership, encouraging development of water oriented uses on public and private shorelines, eliminating shoreline pollution, accommodating the growing need for aquatic recreational facilities, and encouraging joint public and private planning of city shorelines. In addition, there are a series of policies, guidelines and regulations which apply to specific developments and activities.

The Master Program identifies distinct shoreline environments and categorizes them as either natural, conservancy or urban. Figure 3 illustrates the general distribution of natural, conservancy and urban shorelines in Tacoma. The Ruston Way, Schuster Parkway and City Waterway segments are designated "urban".

> "The objective of the urban environment is to ensure optimum utilization of the shorelines within urbanized areas by providing for intensive public use and by managing development so that it enhances and maintains shorelines for a multiplicity of urban uses."

Urban waterfronts are considered suitable for either mixed public and private development or industrial deep water facilities. Ruston Way and City Waterway fall into the former category and Schuster Parkway, the latter. Since Schuster Parkway separates Ruston Way from City Waterway, three distinct shoreline segments are created. The Master Program labels Ruston Way, S6; Schuster Parkway, S7; and, City Waterway, S8 (Figure 3).

Urban areas, which are designated appropriate for mixed public and private development, emphasize public shoreline acquisition for development of water-related parks, open space and recreation facilities, within the limits of community desire and financial capability. Private water-related uses are subject to compliance with shoreline development policies as well as design and performance standards. Urban areas which are designated appropriate for industrial deep water facilities recognize the statewide interest in preserv-

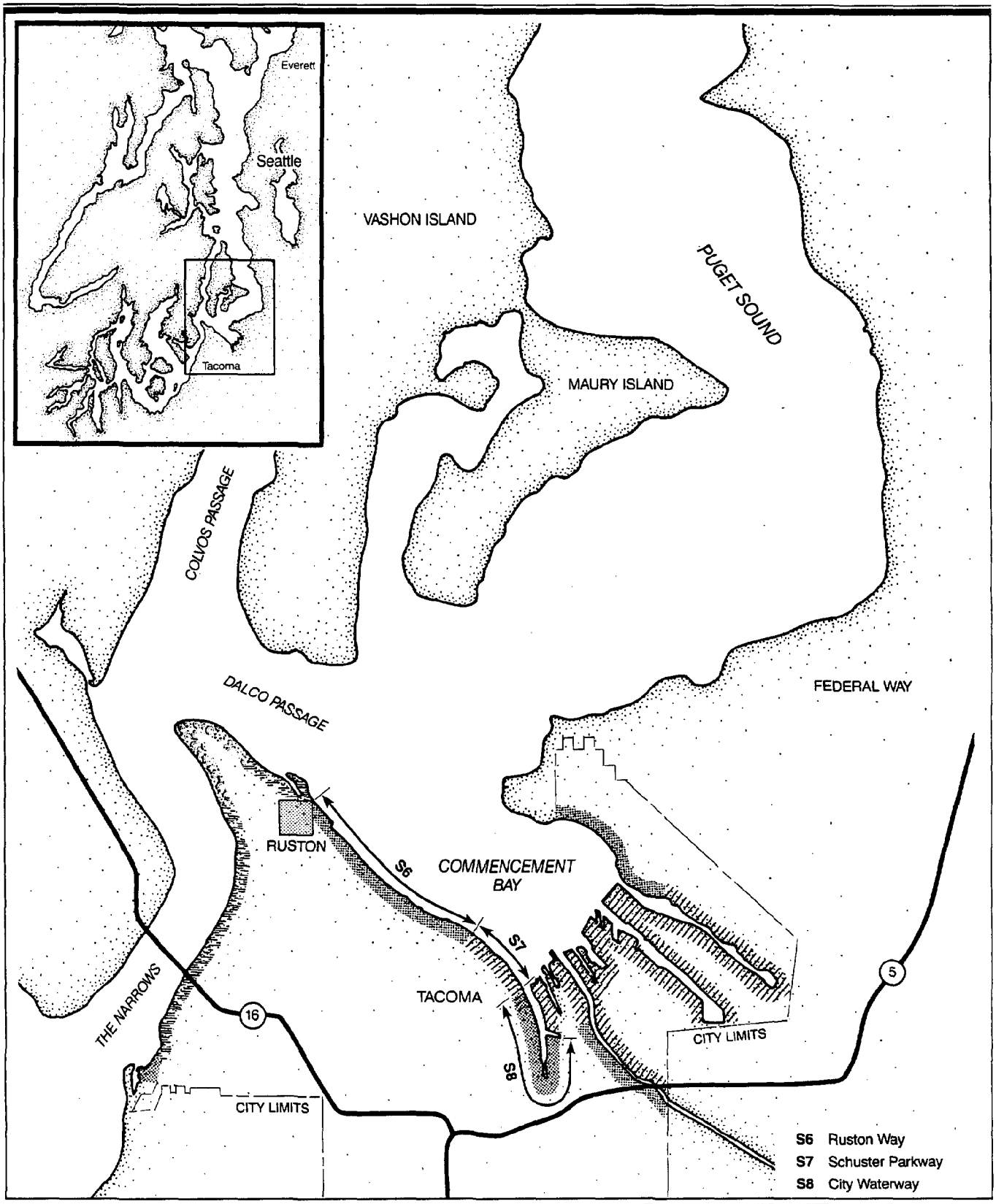


Figure 3.
General Plan Concept for Shoreline Use

ing and maintaining natural, deepwater ports for maritime commerce in Puget Sound.

The specific uses which can be permitted either outright or conditionally on the Ruston Way, Schuster Parkway and City Waterway shorelines are presented on Table 1, along with permitted uses for other shoreline segments on the Tacoma waterfront. Appendix A presents the portions of the Master Program which detail the allowable uses on each of the three subject shorelines, as well as the specific policies and regulations which apply. The following discussion summarizes the specific policies and regulations which apply to the Ruston Way, Schuster Parkway and City Waterway shorelines.

Ruston Way

The Master Program recognizes that Ruston way has limited usefulness for deep draft shipping and heavy industrial uses. It also concludes that it is not an appropriate shoreline for residential development. The Master Program acknowledges the existence of industrial activity on the ASARCO property at the extreme north end of Ruston Way but disallows such uses on the rest of the shoreline segment. Residential uses are prohibited outright.

Uses which are automatically considered appropriate (permitted uses) include commercial water-dependent (upland and over-the-water) and commercial water-related (upland location only). Activities which must be approved as conditional uses, include commercial, water-related on piers and nonwater-dependent or water-related uses (upland locations only).

It is the adopted policy of the City of Tacoma to acquire properties which have a particular public benefit. The Ruston Way shoreline is valued for its scenic beauty, historic interest and open space. Presently, about 40 percent of this shoreline segment is in public ownership. It is not the intent of the city to acquire control of the entire length of Ruston Way.

The Master Program envisions a mix of coordinated and compatible public and private developments.

Table 1. Uses permitted in shoreline districts, City of Tacoma[a]

Shoreline Districts Located in COBS Study Area		Environmental Designation	Sustantial Development: Permitted Use (A); Special Consideration (B), Conditional Use (C) Activities																										
			Educational/ Archaeological	Navigational Aids	Passive Recreation	Aquaculture	Bulkheads	Commercial (Water-Dependent)	Dredging (Maintenance)	Marina and Boat Launch	Piers	Recreation (Water-Dependent)	Road Design, Construction	Utilities	Landfill	Port and Water-Related Industry	Residential, Upland Location	Railroad	Groins	Jetties	Non-Water-Related Industry	Water-Related Hotels/Motels	Shoreline Protection	Log Rafting, Storage	Breakwater	Dredging (Non-Maintenance)	Commercial (Non-Water-Dependent)		
S-4	Point Defiance (Natural Environment)	Natural	A	A	A																								
S-5	Point Defiance (Conservancy Environment)	Conservancy	A			A	A	A	A	A	A	A	A	A	B										B				
S-6	Ruston Way	Urban	A			A	A	A	B	A	A	A	A	A	B	A	A	A[(b)] C[(c)]	B	C					B	C			
S-7	Schuster Parkway	Urban	A			A	A	A	A	C	A	A	A	A	A	A		A	B	C	C				A	C	B		
S-8	City Waterway	Urban	A			A	A	A	A	A	A	A	A	A	A		A	A				A			A	A			
S-9	Puyallup River	Urban	A			A	C	A	B	C	C	A	A	A	A	A		A	B	B			A			B			
S-10	Port Industrial	Urban	A			A	A	A	A[(a)] B[(f)]	A	A	A	A	A	A[(d)]	A		A	A[(d)] B[(f)]	A[(d)] B[(f)]	C		A	A[(e)]	A	A[(d)] B[(f)]	C		
S-11	Marine View Drive South	Urban	A			A	A	A	A	A	A	A	A	A	A	A		A	A	A	B			A[(e)]	A	A	B		
S-12	Marine View Drive North	Urban	A				A	A	B	A	A	A	A	A	B		A		C	C					B	B			

(a) Data from: Tacoma Planning Commission (1976).
(b) Extension of spur lines only.
(c) New railroad construction only.
(d) Except in Puyallup River.
(e) For cargo handling purposes.
(f) In Puyallup River.

Schuster Parkway

The natural, deepwater lying immediately offshore is a significant characteristic of the area, making it extremely desireable for port development. However, given the park area to the north on Ruston Way and the residential uses on the adjoining uplands, special consideration must be given to the interrelationship of these adjoining activities.

Permitted uses on Schuster Parkway include water-dependent/related industrial and commercial activities. Nonwater-dependent/related proposals can be permitted as conditional uses.

City Waterway

The Master Program recognizes the substandard conditions of City Waterway and encourages reuse and redevelopment. It envisions marinas, water-oriented commercial development, and public amenities. It views City Waterway as an extension of downtown Tacoma and determines that the waterfront has an important role to play in the overall revitalization of the central business district.

Uses which are encouraged to locate on City Waterway include commercial (water-dependent and water-related) upland multiple-residential, hotels and motels in conjunction with water-dependent and water-related uses and nonwater-dependent and nonwater related (upland locations only). Industrial uses are not considered appropriate.

GENERALIZED LAND USE PLAN

The Generalized Land Use Plan (Land Use Plan) is an element of the city's long range Comprehensive Land Use Management Plan. It was adopted in 1980 and it is basically a policy document that is intended to be used in harmony with other city plans.

The Land Use Plan assigns development potentials to areas within the city. Based on a series of assumptions, sectors of Tacoma were determined to be appropriate for either high, medium, or low intensity development. These areas are depicted on the Generalized Land Use Map and are defined as follows:

High Intensity

Areas that are characterized by the most intense development in the city. These areas are characterized by high activity patterns, high traffic generation, high density residential development, the presence of major employment centers and commercial and industrial development of regional significance.

Medium Intensity

Areas characterized by land uses that have moderate activity patterns and traffic generation, commercial or industrial activity of community-wide significance and medium density residential development.

Low Intensity

Areas characterized by low activity patterns and traffic generation. Included are single family residential areas, neighborhood convenience commercial establishments, community facilities and open space.

Figure 4 shows the Ruston Way, Schuster Parkway and City Waterway shorelines with the development intensity designations that are depicted on the Generalized Land Use Map. In the Land Use Plan each intensity has an accompanying set of policies which apply to residential, commercial and industrial development. Therefore, each shoreline segment has a specific set of policies for residential, commercial and industrial development, depending on whether it is a high, medium or low intensity area. Clearly, if the use is prohibited in the Master Program the applicable intensity policies are not relevant. For example, industrial uses are generally not allowed in City

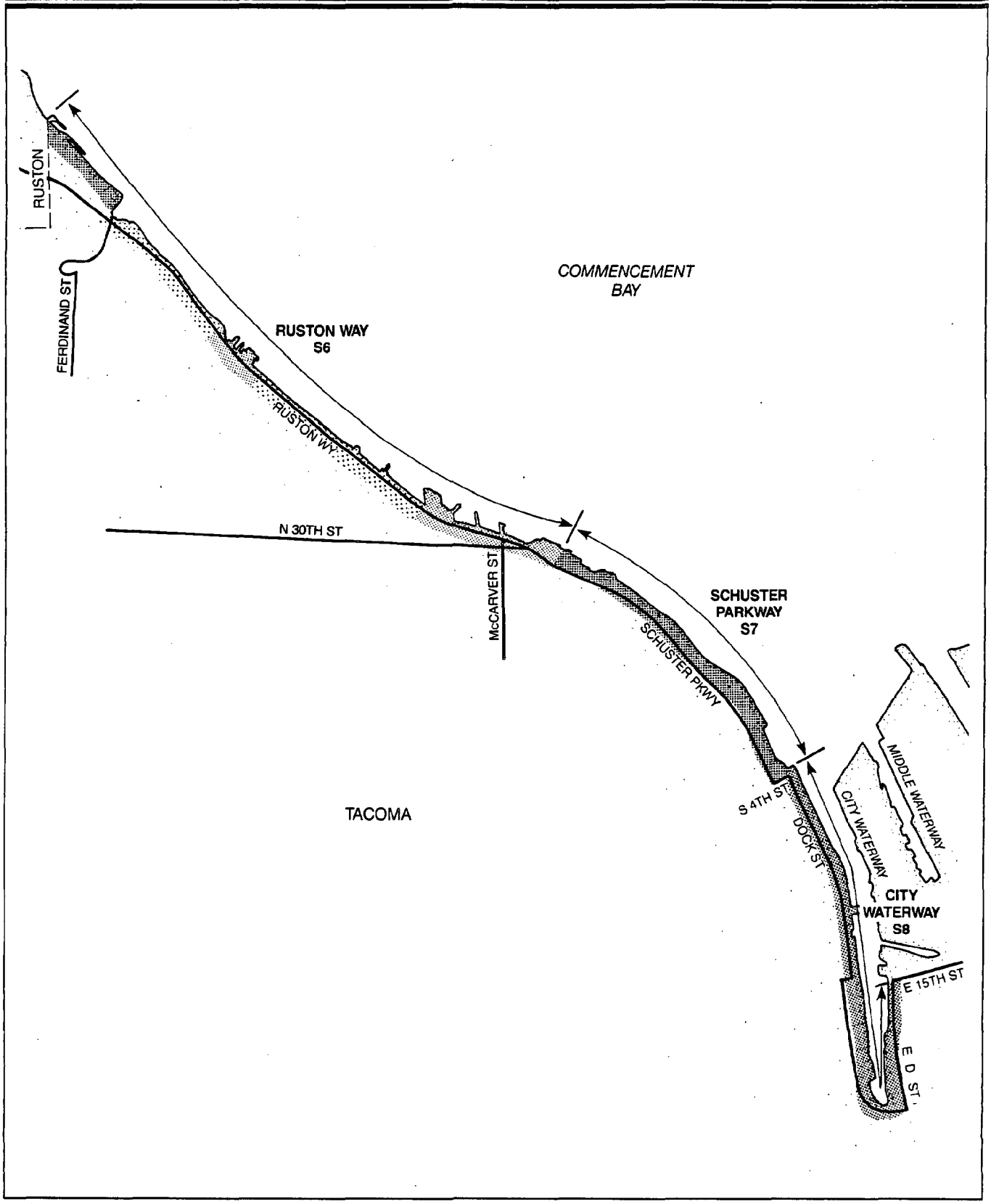


Figure 4. Generalized Land Use

Waterway. Since City Waterway is considered a high intensity area, policies for high intensity industrial uses are not applicable.

The following policies apply to developments which can be approved along the Ruston Way, Schuster Parkway and City Waterway shorelines: (Note: only select policies are summarized)

High Intensity Residential

City Waterway: Encourage the rehabilitation and renewal of deteriorating areas; make sure there is sufficient access and adequate utilities; maximize marine views; locate near public open spaces; encourage high, medium, and low income residential; prevent disruption to the surrounding environment; encourage uses of areas under and on the top of buildings for open space, recreation and parking; and, encourage innovations in the development of high intensity residential areas to include such conveniences as grade separated pedestrian crossings, public transit connections and mixed use development within high rise structures.

High Intensity Commercial

City Waterway and Schuster Parkway: Concentrate in areas which maximize space; encourage rehabilitation; promote joint uses of parking space; maximize the central business core development; and encourage pedestrian malls, walkways, circulation routes, and people mover systems; use open space to compliment and enhance commercial areas.

Medium Intensity Commercial

Ruston Way: maximize land use; locate near the residential areas that they serve; locate near principal arterial streets; allow moderately scaled office and professional services; minimize adverse affects on surrounding areas; after careful review, permit planned business parks

under special circumstance; and, encourage planned commercial development.

Low Intensity Commercial

Ruston Way: permit low intensity neighborhood convenience commercial developments; small scaled offices and professional uses which have limited contact with the public; and ensure that uses are compatible with surroundings.

High Intensity Industrial

Schuster Parkway and Ruston Way (ASARCO): encourage industrial development to locate in existing industrial areas with access to major transportation facilities; permit expansion if surrounding uses are not adversely affected; require adherence to performance standards; locate in areas with suitable utilities; and encourage beautification measures.

RUSTON WAY PLAN

The Ruston Way Plan is a design and development guide for revitalization efforts on the shoreline and is also an element of the Shoreline Master Program. Its intended purpose is, "to develop an active and attractive urban waterfront of mixed public and private development that meets community recreation needs and emphasizes the shoreline for public use." The emphasis of the plan is on design elements for proposed development, acquisition of property, provisions for adequate beach access, pedestrian access improvements to Ruston Way from nearby residential areas, preservation of historical areas, and protection of natural gulch environments.

WESTSIDE PLAN

Adopted in 1985, the Westside Plan is a neighborhood land use guide which includes the ASARCO property on the north end of Ruston Way. The plan recognizes the pollution control efforts which are underway and the

industrial potential of the site. It does state, however, that industrial redevelopment must be compatible with adjacent uses and should meet strict standards of operation and performance.

NORTH SLOPE PLAN

The North Slope Plan encompasses the south half of Ruston Way and Schuster Parkway (to the point where it would intersect with Division Avenue). It is a plan which addresses the physical use of and distribution of different types of land uses.

With regard to Ruston Way, the North Slope Plan recognizes that the development of the Old Town Commercial District and the waterfront are closely linked. It envisions coordinated, compatible and consistent development between the two areas, which would highlight the historical and maritime character. It also recommends that linkages be improved and maintained between the upland residential areas and the shoreline, through a trail system within Garfield Gulch and Buckley Gulch.

For Schuster Parkway, the plan recognizes the natural deepwater offshore that makes the area suitable for water-dependent development. While designating it an area appropriate for industrial use, the plan also states that special consideration should be given to the interrelationships of adjoining areas. In addition, the steep, wooded slopes which rise above Schuster Parkway are to be kept in perpetual open space.

CENTRAL BUSINESS DISTRICT PLAN

The Central Business District Plan (CBD Plan) recognizes that City Waterway has the potential to become one of Tacoma's most valuable assets. It considers the redevelopment of City Waterway as an essential and important part of the revitalization of downtown Tacoma. Envisioned is a dynamic waterfront, supporting a mix of residential, commercial and public uses. Uses which are encouraged to locate on City Waterway include: marinas,

restaurants, multi-residential units, offices, hotels/motels, parks and recreational facilities.

Policies expressed in the CBD Plan are:

- o Encourage relocation of all existing City Waterway industrial uses which are nonwater-dependent or nonwater-related to locations away from the waterfront.

- o Upgrade the quality of development of existing city ownerships on city Waterway, with particular reference to public access and utilization, code compliance, and general design and appearance.

- o Seek additional city ownership of City Waterway properties including:

  - properties which are logical extensions of existing city ownerships or;
  - properties which may have potential for the development of public parks, open space or other needed public facilities.

- o Maintain and improve the water quality in City Waterway for the enjoyment of the area as a commercial recreational waterfront through water quality monitoring and other means that may be necessary.

- o Continue to provide a continuous promenade, riprap or other appropriate shore protection and street landscaping as part of the public and private developments along the City Waterway.

METHODOLOGY

The Shoreline Management Act Guidelines for Development of Master Programs (Chapter 173-16 WAC) directs local governments to approach shoreline planning in a comprehensive manner. To this end the recent Department of Ecology report, Urban Waterfront Policy Analysis, recommends the development of a comprehensive waterfront plan.

The plan should provide an overlay for shoreline decisions. It should be a framework within which decisions effecting the long term character of a shoreline can be made and changes justified. The recommended elements of a comprehensive waterfront plan include; an inventory, a suitability analysis, an evaluation of economic conditions, a statement of community goals, and development objectives (Figure A).

The inventory provides a basic description of the shoreline. It should include: a land use inventory, a statement of land ownership patterns, an analysis of historical and current development trends, an assessment of environmentally sensitive conditions as well as other development constraints, and some detail regarding adjacent lands, views and transportation access to the shoreline.

The suitability analysis examines physical shoreline characteristics to determine if the waterfront meets the locational requirements of specific water-dependent and water-related uses. The intent is to identify areas that are particularly well suited for activities which require a waterfront location as well as those areas that are not. A suitability analysis provides a rational way of determining where water-dependent and water-related uses should locate as well as a rationale to justify exceptions for nonwater-dependent activities.

The evaluation of economic conditions is an analysis of past and future economic trends. It is a realistic appraisal of the current market demand for various uses in the area and reasonable projections for future demands or changes in waterfront utilization.

Together the inventory, suitability analyses and economic evaluation provide a detailed understanding of the shoreline under review. Once completed, it is possible to look at the issues and problems, which have been raised in a public forum, and formulate a set of community goals and development objectives. The result of these efforts is a comprehensive waterfront plan for the area.

Once goals and objectives are established, the next step is to develop a management strategy and to establish ways of achieving these ends. In this category fall revisions to the Master Program, commitments to undertake capital improvements and memos of understanding with key players.

Phase I of this report provides the inventory, suitability analysis and evaluation of economic conditions for the Ruston Way, Schuster Parkway and City Waterway Shorelines. Phase II examines the issues that have been raised and recommends responses to the issues. Together the two parts represent a first step toward a comprehensive waterfront plan. It is hereby respectfully submitted for public review and consideration.

Section II:
1987 Land Use Inventory

SECTION II

1987 LAND USE INVENTORY
WATERFRONT PROPERTIES
RUSTON WAY - SCHUSTER PARKWAY - CITY WATERWAY

SUMMARY

GENERAL

- The shoreline, from the Town of Ruston limits, south to South 15th Street on the east side of City Waterway is 6.2 miles long.

- There are 70 documented uses along this shoreline. Almost 50% of the uses are nonwater-dependent. Another 32% are water-dependent or water-related (the majority of which involve recreational boating). There are also seven restaurants and seven distinct park areas.

- Fifty percent of the shoreline is vacant. Ruston Way has the highest amount of vacant land with 54 acres. Schuster Parkway is next with 31 vacant acres and City Waterway has 12 acres. A total of forty parcels do not support a use, translating into 13,685 feet of vacant waterfront.

- Private interests own sixty-five percent of the available waterfront footage. Burlington Northern is the largest private land holder with 27 percent. The City of Tacoma owns 25 percent, the Port of Tacoma six percent, and three percent belongs to the federal government.

- The three shoreline segments have distinctly different characters. Ruston Way is dominated by nonwater-dependent uses and opportunities for the public to enjoy the shoreline. Professional office buildings, parks and restaurants are primary features and only one of the shoreline uses is water-dependent. In contrast, Schuster Parkway is a working water-

front with the moorage of large ocean-going vessels and a grain elevator. Respectively these uses are considered water-dependent and water-related. City Waterway is also characterized by water-dependent and water-related uses, but almost all of these involve recreational boating. In addition, City Waterway supports a wide variety of non-water-dependent uses.

RUSTON WAY

- Except for a large portion of dry land in ASARCO ownership, there is very little dry land along the Ruston Way shoreline. For this reason, most of the 25 land use activities in that area involve over-the-water construction.

- Almost half of the uses along Ruston Way are nonwater-dependent and most of these are professional services. Since the nonwater-dependent uses are clustered in multiple-use developments, only one percent of the shoreline supports this category of use. Only one of the uses on Ruston Way can be described as water-dependent and two are water-related. In contrast, there are five restaurants, all of which involve over-the-water construction. The six parks on Ruston Way (one of which is being developed), utilize 25 of the 85 available waterfront acres. However, only seven acres are uplands and the remaining 18 acres are tidelands.

- There are 22 vacant parcels along Ruston Way, involving 54 acres. The ASARCO ownership accounts for 34 of the 54 vacant acres.

- On Ruston Way, private interests own 59 percent of the waterfront footage and the City of Tacoma owns 40 percent. In terms of acreage, 70 percent is in private ownership and 30 percent belongs to the public. The latter figure does not include the public land within the right-of-way of Ruston Way.

SCHUSTER PARKWAY

- Schuster Parkway is characterized by two shoreline uses. One of these is water-dependent (moorage of large vessels) and one is water-related (grain elevator). Together the two activities utilize 24 of the 55 available waterfront acres. The remaining 31 acres on Schuster Parkway are vacant and owned primarily by Burlington Northern. Eight of the 31 vacant acres are owned by the federal government. There is no public ownership on this segment of shoreline.

CITY WATERWAY

- A total of 43 uses were documented on City Waterway. Of the 17 water-dependent and water-related uses, all but three are associated with recreational boating. The exceptions are a concrete batch plant which receives gravel by barge and two fresh fish distributors. There are also 23 nonwater-dependent uses, representing a wide range of businesses, manufacturers and services. In addition, there are two restaurants on City Waterway and one park.

- Twelve of the 54 waterfront acres on City Waterway are vacant. This affects 2,148 feet of shoreline, the majority of which is in Burlington Northern ownership.

- Private interests are the major land holders in the City Waterway segment. Burlington Northern owns 50 percent (27 acres) and other private interests hold 34 percent (18 acres). The City of Tacoma owns the remaining 16 percent (9 acres).

INTRODUCTION

A primary objective of this study is to provide background information which can be used in the development of a comprehensive waterfront plan for the three shoreline segments of the Tacoma waterfront. To this end, a land use inventory was conducted. This inventory documents and categorizes existing land uses, the incidence of vacant land, and ownership distributions.

Land use activities along the shorelines of Ruston Way, Schuster Parkway and City Waterway were categorized as water-dependent, water-related or nonwater-dependent. Parks and restaurants are considered water-related uses in the Tacoma Master Program, but have been categorized separately so that these uses and acreages can be compared to other activities.

METHODS AND MATERIALS

The land use survey, conducted in December 1987, inventoried properties within 200 feet of the shoreline. These lands fall under the jurisdiction of the Tacoma Master Program and for the most part are located on the waterside of Ruston Way, Schuster Parkway, Dock Street and D Street up to 15th Street. There are a few parcels on the other side of these arterials which are partially within shoreline jurisdiction. Uses on these parcels were inventoried but were not factored into the analysis which categorizes uses by the degree of water-dependency and takes into account vacant waterfront land.

The survey team used a 1986 aerial photograph, a 1982 land-use inventory prepared by Robert F. Goodwin of Sea Grant, assessor's maps and parcel records. With this information and a careful inspection of the shoreline, uses were assigned to specific properties. The project team also identified parcels which were vacant or had abandoned buildings. Parcel acreage, including estimates for dry and submerged land areas were obtained from data prepared for the Tacoma Planning Department during the original 1971 shoreline inventory which preceded the adoption of the Shoreline Master Program.

The parcels were identified by postal address and a data base was set up on this basis. Each use was assigned a four-digit Standard Industrial Classification (SIC) code and was entered into the data base according to its address. In addition, a determination was made as to whether the use was water-dependent, water-related, a restaurant, a park or nonwater-dependent. In some cases, the determination was obvious. For example, marinas are clearly water-dependent. In other cases, the survey team made phone calls to the property owner or asked the Tacoma Planning Department for additional information before completing the classification.

RESULTS

The results of the land use survey are presented in Appendix B. What follows is an analysis of the general findings. The land use details of individual shoreline segments are then discussed separately.

General Findings

The study area comprises the western shoreline of Commencement Bay, extending from the Town of Ruston limits, southwest to the end of City Waterway. It also includes the eastern side of City Waterway, south of S. 15th Street (Figure 1).

Except for the southern end and east side of City Waterway, the shoreline is basically a narrow, flat strip of land at the base of high bluffs. Major transportation corridors dominate this waterfront and to a large extent determine the land use patterns.

A roadway parallels the shoreline. Although continuous, it is variously named Ruston Way, from the Town of Ruston limits to McCarver Street; Schuster Parkway, from McCarver Street to South 4th Street; and Dock Street, from South 4th Street to the southern end of City Waterway. Dock Street rounds the end of City Waterway and intersects East D Street, which parallels the eastern side of the waterway. The length of the subject shoreline is 6.2

miles. Ruston Way is 2.6 miles, Schuster Parkway is 1.4 miles and the City Waterway segment is 2.2 miles long (Figure 2).

A segment of the Burlington Northern mainline tracks run alongside the roadway, from the Town of Ruston limits to the southern end of City Waterway. The northern and southern ends of Schuster Parkway are elevated to cross over the tracks. As a result, the railroad is on the water side of the road along Schuster Parkway, and on the landward side of Ruston Way and Dock Street.

The road and rail rights-of-way utilize most of the available dry land along the shoreline. However, parcels have been created waterward of these transportation corridors. Property lines extend to the inner-harbor line and in some cases, fill has created dry land areas. In other cases, the shoreline has not been substantially altered, and the waterfront parcels consist mostly of submerged lands. There are a total of 194 platted acres along the waterfront: 133 acres dry land and 61 acres submerged. Varying levels of fill activity and differential erosion have given the subject shoreline an irregular appearance.

The waterfront parcels were inventoried for the land use survey. While it is recognized that transportation corridors are a dominant use along the entire shoreline, the focus of the survey was to identify and classify specific activities which were utilizing a shoreline location. What follows is a general description of these activities, a discussion of vacant land and an analysis of ownership patterns.

Waterfront Activity

In December of 1987, there were 70 documented uses, utilizing 98 of the 194 available waterfront acres.

Water-dependent Uses

Ten of the 194 platted acres are used exclusively for water-dependent uses. Another 19 acres are used by multiple use developments which include at least

one water-dependent use. Combining all the properties that support at least one water-dependent use yields 29 acres or 15 percent of the area being inventoried. Of land supporting a water-dependent use, 19 acres are dry land and 10 acres are submerged.

Altogether, there are 11 water-dependent uses which account for 16 percent of the 70 recorded uses on the shoreline. Nine of the 11 water-dependent uses are on City Waterway.

Water-related Uses

While 15 percent of the available shoreline is characterized by water-dependent uses, 14 percent is devoted exclusively to water-related uses. This amounts to 26 acres in water-related use, of which 25 acres are dry land and one acre is submerged. Five water-related developments utilize the 26 acres and six additional water-related uses are part of multiple use developments. However, since these multiple use developments also have water-dependent elements, the acreage involved has been included in the previously mentioned totals for water-dependent uses.

Altogether, there are 11 water-related uses which represent 16 percent of the 70 recorded uses. Eight of these 11 water-related uses are on City Waterway.

Restaurants

Approximately four acres are devoted to restaurants with another acre given over to a multiple use where a restaurant is the dominant development. Of the five acres involved, four are dry land and one is submerged. It should be noted that two restaurants are part of multiple use developments which have a water-dependent element. The acreage for these developments has been included in the previous discussion of water-dependent uses.

The seven waterfront restaurants in the study area account for 10 percent of the 70 recorded uses. Five of the restaurants are on Ruston Way and two are on City Waterway.

Parks

Approximately 22 acres (11 percent of the subject shoreline) are devoted to parks. Of the 22 acres, 7 are dry land acres and 15 are submerged. Road ends (which are not part of dedicated parks) make up another 7 acres, 3 of which are dry and 4 are submerged. Parks and road ends taken together, account for 15 percent of the available shoreline acreage. However, this actually translates into 32 percent of the submerged land and 7 percent of the available dry land. In effect, 68 percent of the land in public ownership is submerged. Altogether there are seven parks, six on Ruston Way and one on City Waterway.

Nonwater-dependent Uses

Five percent of the subject shoreline, or approximately 9 acres, is utilized exclusively by nonwater-dependent developments. However, many nonwater-dependent uses are part of multiple use developments with water-dependent elements, and this acreage has been accounted for in prior discussions on water-dependent uses. In terms of total numbers, there are 34 nonwater-dependent uses, which is 49 percent of the 70 documented uses.

Table 2 and Figure 5 present the distribution of uses according to shoreline segment and the degree of water-dependency. Figure 6 presents the number of acres devoted to each land use category within each shoreline segment. Tables 3 and 4 present the numbers of acres and percentage of area devoted to each land use classification and each shoreline segment.

Vacant Land

Properties without a use or with an abandoned use were considered vacant. A total of 96 acres, or 50 percent of the shoreline is in this category. Sixty-nine of the 96 vacant acres are dry land and 27 acres are submerged (Tables 3 and 4).

Table 2. Number of documented uses according to the degree of water-dependency: 1987.

Use Type	City Waterway		Schuster Parkway		Ruston Way		Total	
	Number	%	Number	%	Number	%	Number	%
Water-Dependent	9	20.93	1	50.00	1	4.00	11	15.71
Water-Related	8	18.60	1	50.00	2	8.00	11	15.71
Restaurants	2	4.65	0	0.00	5	20.00	7	10.00
Parks	1	2.33	0	0.00	6	24.00	7	10.00
Non-Water Dependent	23	53.49	0	0.00	11	44.00	34	48.57
Total	43	100.00	2	100.00	25	100.00	70	100.00

Table 3. Land Area in Acres by Use: 1987

Use Type	City Waterway			Schuster Parkway		
	Dry Land	Sub Land	Total Land	Dry Land	Sub Land	Total Land
Water Dependent	4.17	1.30	5.47	1.27	2.09	3.36
Water Related	4.36	0.54	4.90	20.52	0.36	20.88
Restaurants	0.00	0.00	0.00	0.00	0.00	0.00
Parks	0.39	0.08	0.48	0.00	0.00	0.00
Road Ends	2.40	0.95	3.35	0.00	0.00	0.00
Nonwater-Dependent	8.68	0.47	9.15	0.00	0.00	0.00
Multiple Use[1]	12.44	6.51	18.95	0.00	0.00	0.00
Vacant	10.65	1.50	12.16	24.87	5.74	30.61
Total	43.09	11.37	54.46	46.66	8.19	54.85

Use Type	Ruston Way			Total		
	Dry Land	Sub Land	Total Land	Dry Land	Sub Land	Total Land
Water Dependent	0.34	0.34	0.68	5.78	3.73	9.51
Water Related	0.00	0.42	0.42	24.88	1.32	26.20
Restaurants	2.72	0.99	3.70	2.72	0.99	3.70
Parks	6.22	15.59	21.81	6.61	15.68	22.29
Road Ends	0.33	2.95	3.28	2.73	3.90	6.63
Nonwater-Dependent	0.00	0.12	0.12	8.68	0.59	9.27
Multiple Use[1]	0.18	0.94	1.12	12.62	7.45	20.07
Vacant	33.97	19.66	53.63	69.49	26.91	96.40
Total	43.75	41.01	84.77	133.50	60.57	194.08

[1]Multiple Use: Properties which support more than one distinct activity. The activities can include water-dependent, water-related and non-water-dependent uses as well as restaurants.

Table 4. Percent of total land area by use: 1987

Use Type	City Waterways			Schuster Parkway		
	Dry Land	Sub Land	Total Land	Dry Land	Sub Land	Total Land
Water Dependent	9.68	11.44	10.05	2.72	25.49	6.12
Water Related	10.11	4.79	9.00	43.99	4.40	38.07
Restaurants	0.00	0.00	0.00	0.00	0.00	0.00
Parks	0.91	0.73	0.87	0.00	0.00	0.00
Road Ends	5.57	8.36	6.15	0.00	0.00	0.00
Nonwater-Dependent	20.13	4.15	16.81	0.00	0.00	0.00
Multiple Use[1]	28.87	57.31	34.80	0.00	0.00	0.00
Vacant	24.72	13.23	22.32	53.30	70.11	55.81
Total	100.00	100.00	100.00	100.00	100.00	100.00

Use Type	Ruston Way			Total		
	Dry Land	Sub Land	Total Land	Dry Land	Sub Land	Total Land
Water Dependent	0.77	0.84	0.80	4.33	6.16	4.90
Water Related	0.00	1.02	0.49	18.64	2.18	13.50
Restaurants	6.21	2.41	4.37	2.03	1.63	1.91
Parks	14.22	38.02	25.74	4.95	25.88	11.48
Road Ends	0.75	7.19	3.87	2.04	6.44	3.42
Nonwater-Dependent	0.00	0.29	0.14	6.50	0.97	4.78
Multiple Use[1]	0.40	2.29	1.32	9.45	12.31	10.34
Vacant	77.65	47.94	63.27	52.05	44.42	49.67
Total	100.00	100.00	100.00	100.00	100.00	100.00

[1]Multiple Use: Properties which support more than one distinct activity. The activities can include water-dependent, water-related and nonwater-dependent uses as well as restaurants.

Figure 5. Number of uses by shoreline segment and degree of water-depenency: 1987

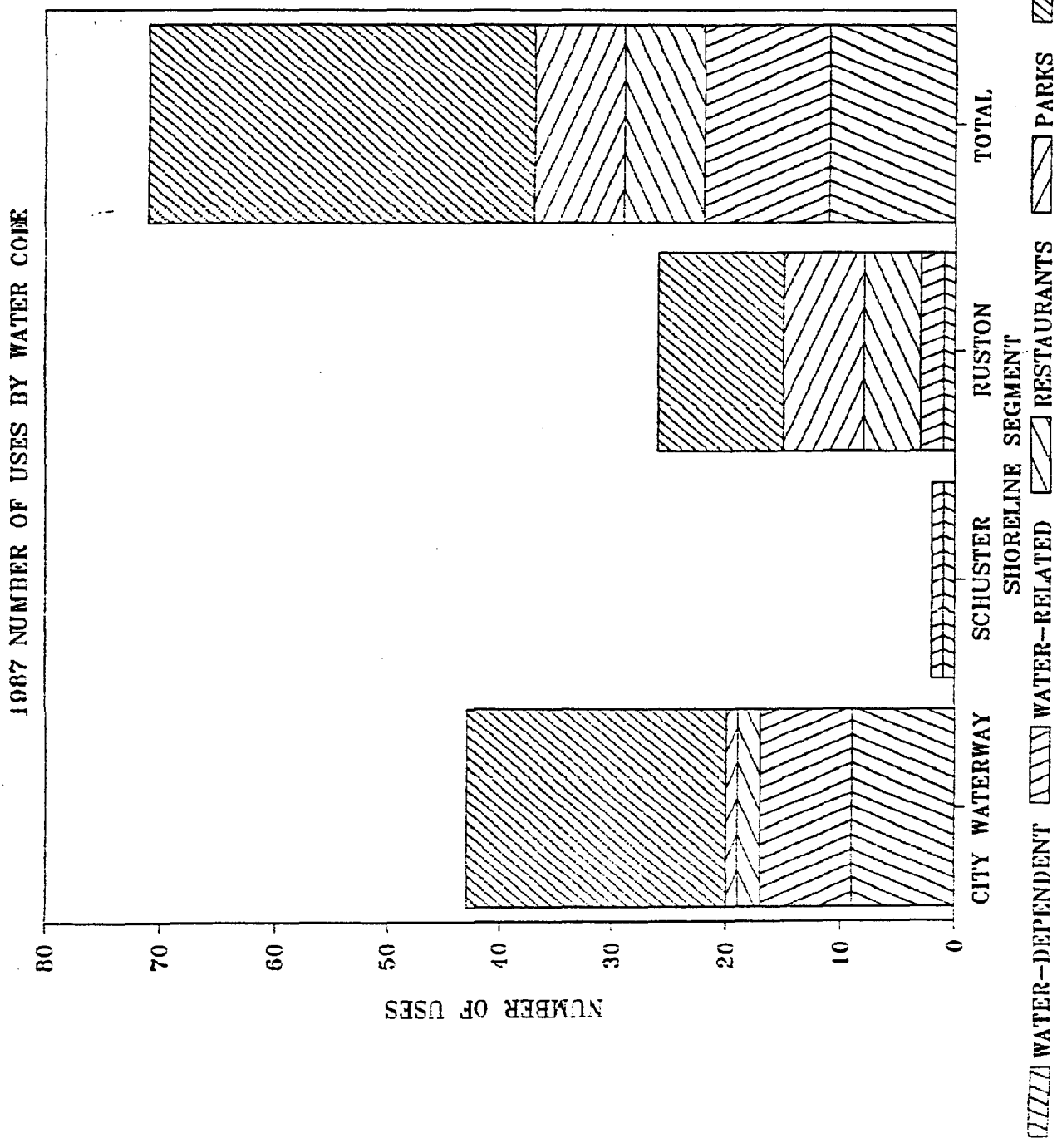
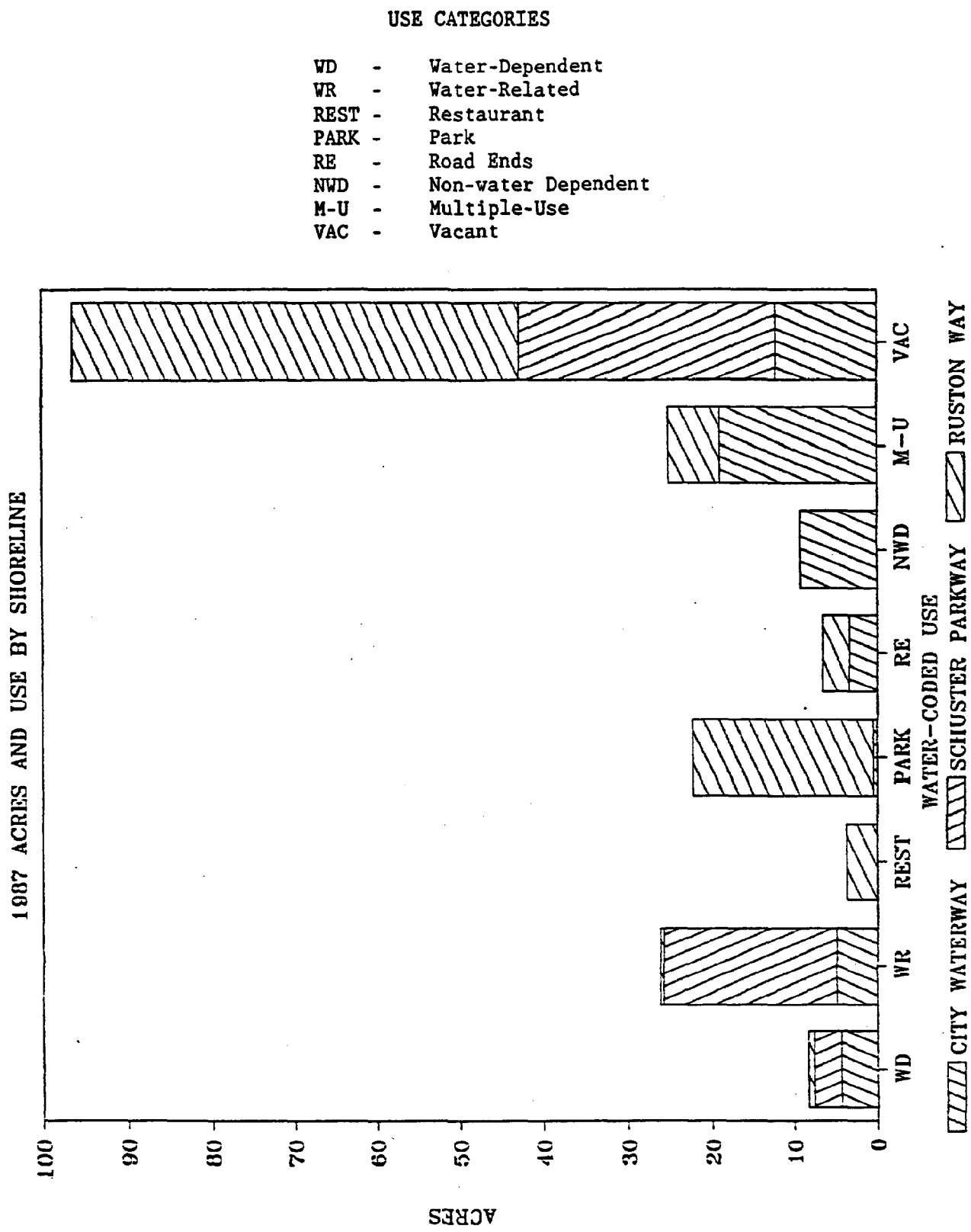


Figure 6. Number of acres and use by shoreline segment: 1987



Over half of the vacant land (54 acres) is in the Ruston Way segment. However, the ASARCO property on the north end of Ruston Way, accounts for 34 of these 54 vacant acres. Almost all of the vacant dry land on Ruston Way is in ASARCO ownership. Out of the 54 vacant acres on Ruston Way, 34 are dry land acres and 31 of these are owned by ASARCO. In contrast, of the 20 acres of vacant land on Ruston Way south of ASARCO, only two acres are dry.

If the 34 acres of vacant ASARCO property is taken out of the analysis, 62 vacant acres remain on the three shoreline segments combined. Twenty of these are on Ruston Way, 30 on Schuster Parkway, and 12 on City Waterway. On City Waterway, 11 of the 12 vacant acres are dry lands. On Schuster Parkway, 25 of the 31 vacant acres are dry. This compares with Ruston Way where there are two acres of vacant dry land and 18 acres of submerged vacant land (not counting the ASARCO acreage).

The 96 acres of total vacant land translate into 40 vacant parcels and 13,685 feet of waterfront. Vacant lands account for 55 percent of all parcels, 50 percent of all acreage, and 42 percent of total waterfront footage. In terms of the individual shoreline segments, there are 6,887 feet of vacant waterfront on Ruston Way, 4,650 feet on Schuster Parkway and 2,258 feet on City Waterway.

Ownership

The land use survey team determined that 21,486 feet (66 percent) of the 32,555 feet of waterfront along the subject shoreline is in private ownership. Burlington Northern is the largest single private owner of waterfront, with 8,790 feet (27 percent). For purposes of analysis and comparison, ownership figures for Burlington Northern have been listed separately throughout this report. In addition, other private interests own 12,477 feet (38 percent) of the shoreline, the City of Tacoma owns 8,139 feet (25 percent including road ends); the Port of Tacoma owns 1,953 feet (6 percent) and the federal government owns 977 feet (3 percent) (Table 5).

Table 5. Shoreline ownership by number of waterfront feet and percent: 1987

Owner	City Waterway		Schuster Parkway		Ruston Way		Total	
	Frontage	%	Frontage	%	Frontage	%	Frontage	%
Private	3,355	30.42	950	12.50	8,172	58.67	12,477	38.33
City of Tacoma	1,450	13.15	0	0.00	5,057	36.31	6,507	19.99
Burlington Northern	5,401	48.97	3,410	44.89	0	0.00	8,811	27.06
Port of Tacoma	0	0.00	2,097	27.60	0	0.00	2,097	6.44
Federal Government	0	0.00	1,140	15.01	0	0.00	1,140	3.50
Public Road Ends	823	7.46	0	0.00	700	5.03	1,523	4.68
Total	11,029	100.00	7,597	100.00	13,929	100.00	32,555	100.00

Ownership breaks down differently when considering acreage rather than waterfront footage. Of the 194 acres available: 67 percent is privately owned with 26 percent owned by Burlington Northern; 18 percent belongs to the City of Tacoma; 11 percent is owned by the Port of Tacoma and the federal government owns 4 percent (Tables 6 and 7).

Ownership patterns vary within the individual shoreline segments. Private interests hold 84 percent of the available land in City Waterway; 48 percent on Schuster Parkway and 70 percent on Ruston Way. As a private owner, Burlington Northern owns 50 percent of the land along City Waterway, 41 percent on Schuster Parkway and none on the Ruston Way waterfront. In contrast, the City of Tacoma owns 16 percent of the shoreline acreage on City Waterway; 30 percent on Ruston Way; and, none on Schuster Parkway. Both the Port of Tacoma and the federal government own land along Schuster Parkway (38 percent and 14 percent respectively), but none in the other two shoreline segments (Figure 7).

RUSTON WAY

The Ruston Way shoreline is characterized by a narrow strip of flat land backed by bluffs which rise steeply from sea level to 250 feet. The exception is the area near Old Tacoma where the slope is much more gradual. Burlington Northern maintains two sets of tracks along the base of the bluff. These tracks are slightly higher in elevation than the adjacent flat land of the roadway and the shoreline. Ruston Way runs parallel to the tracks and most of the dry land area between the road and the shoreline is within the 100 foot-wide road right-of-way. Landscaping, a bike/pedestrian path, and parking are uses which occur within the right-of-way. Due to the limitation of available dry land, most of the development on parcels seaward of the road right-of-way, is over-the-water construction (Figure 8).

The Ruston Way land use survey focuses on properties seaward of the road right-of-way. These lands are platted and extend out to the inner harbor line. What follows is an inventory of existing activities, a discussion of

Table 6. Land area in acres by owner and shoreline segment: 1987

Owner	City Waterway			Schuster Parkway		
	Dry Land	Sub Land	Total Land	Dry Land	Sub Land	Total Land
Private	16.07	2.34	18.42	1.61	2.23	3.85
City of Tacoma	6.75	1.88	8.63	0.00	0.00	0.00
Burlington Northern	20.27	7.14	27.41	16.88	5.54	22.43
Port of Tacoma	0.00	0.00	0.00	20.52	0.36	20.88
Federal Government	0.00	0.00	0.00	7.64	0.06	7.69
Total	43.09	11.37	54.46	46.66	8.19	54.85

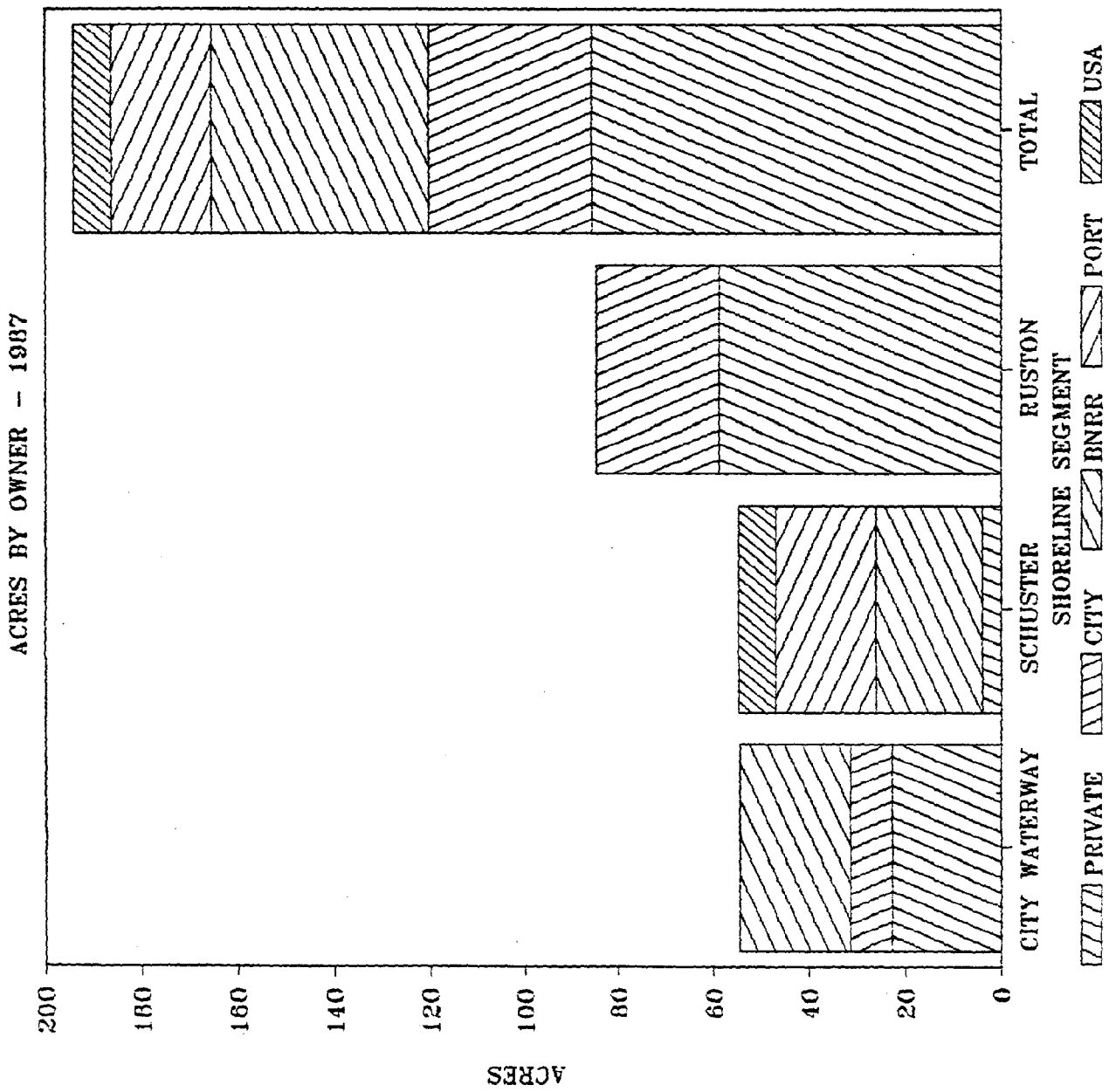
Owner	Ruston Way			Total		
	Dry Land	Sub Land	Total Land	Dry Land	Sub Land	Total Land
Private	34.19	24.80	58.99	51.88	29.37	81.25
City of Tacoma	4.27	21.51	25.78	11.02	23.39	34.41
Burlington Northern	0.00	0.00	0.00	37.16	12.68	49.84
Port of Tacoma	0.00	0.00	0.00	20.52	0.36	20.88
Federal Government	0.00	0.00	0.00	7.64	0.06	7.69
Total	38.46	46.31	84.77	128.22	65.87	194.08

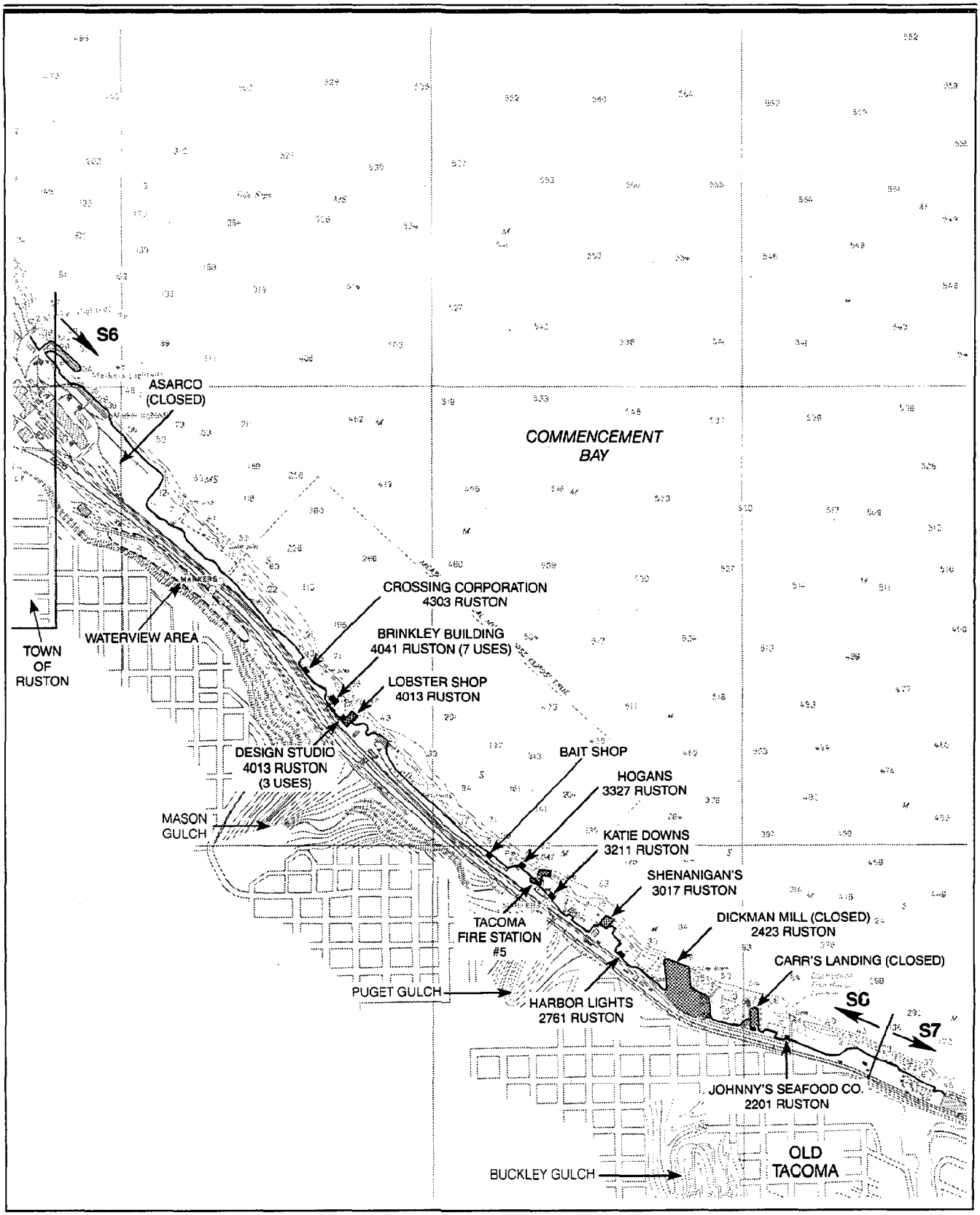
Table 7. Percentage of total land area by owner and shoreline segment: 1987

Owner	City Waterway			Schuster Parkway		
	Dry Land	Sub Land	Total Land	Dry Land	Sub Land	Total Land
Private	37.29	20.63	33.82	3.46	27.24	7.01
City of Tacoma	15.66	16.54	15.85	0.00	0.00	0.00
Burlington Northern	47.04	62.83	50.34	36.19	67.66	40.89
Port of Tacoma	0.00	0.00	0.00	43.99	4.40	38.07
Federal Government	0.00	0.00	0.00	16.37	0.70	14.03
Total	100.00	100.00	100.00	100.00	100.00	100.00

Owner	Ruston Way			Total		
	Dry Land	Sub Land	Total Land	Dry Land	Sub Land	Total Land
Private	88.90	53.55	69.59	40.46	44.59	41.86
City of Tacoma	11.10	46.45	30.41	8.59	35.51	17.73
Burlington Northern	0.00	0.00	0.00	28.98	19.26	25.68
Port of Tacoma	0.00	0.00	0.00	16.01	0.55	10.76
Federal Government	0.00	0.00	0.00	5.96	0.09	3.96
Total	100.00	100.00	100.00	100.00	100.00	100.00

Figure 7. Acreage by owner and shoreline segment: 1987





Soundings in Feet

SCALE IN FEET

0 1,000 2,000

N

Figure 8.
Ruston Way
1987 Land Use

the incidence of vacant land, a breakdown of ownership patterns and a description of adjacent lands.

Waterfront Activity

There are 25 land use activities along Ruston Way. Eleven, or 44 percent are nonwater-dependent and consist mostly of professional offices. Only one water-dependent use (the fire boat station) and two water-related uses (a bait shop and a fresh fish store) are located along this stretch of shoreline. The remaining uses include 5 restaurants and 6 parks (Table 2). Public ownership areas for Ruston Way are illustrated in Figure 22 included in Section IV of this report.

Since nonwater-dependent uses on Ruston Way are clustered in multiple use developments, not much acreage is devoted to these activities. Out of the 85 available waterfront acres, only 1.2 acres (one percent) support nonwater-dependent uses. In addition, almost all of the acreage devoted to nonwater-dependent uses is submerged land (Tables 3 and 4). Thus, the developments are almost entirely over water.

Parks and public road ends account for 25 of the 85 acres on Ruston Way. Most of the publicly owned land is submerged . Of the 25 acres of Ruston Way in public ownership, 19 acres are tidelands and six acres are dry lands. Except for two public fishing piers, the parks do not involve over-the-water construction. For the most part, the publicly-owned, submerged lands remain undeveloped.

The five Ruston Way restaurants utilize approximately 4 of the 85 acres. Three acres are dry land and are used for parking. All of the restaurants are over-the-water.

Water-dependent and water-related activities use only one acre of the Ruston Way shoreline. About one-third of this area is dry land and two thirds is submerged. Both the bait shop and the fish store are over-the-water construction and the fire boat station has a dock.

Vacant Land

Waterfront vacancies along Ruston Way account for 50 percent of the shoreline segment. In numbers, this amounts to 6,887 feet of the 13,929 foot Ruston Way shoreline. Twenty-two properties can be considered vacant, although some do have remnant docks and over-the-water structures which have fallen into disrepair (Tables 3 and 4).

In terms of area, vacant parcels account for 54 acres along Ruston Way. Thirty-four acres are dry land and 20 are submerged. As discussed in the previous section, ASARCO owns 31 of the dry land acres and 2 of the submerged. Vacant lands outside of the ASARCO ownership, include 2 dry land acres and 18 submerged. Thus, on Ruston Way, 91 percent of the vacant dry land and 10 percent of the vacant submerged land is part of the ASARCO development.

Ownership

Fifty-nine percent of the Ruston Way waterfront is privately-owned and 41 percent is owned by the City of Tacoma. In waterfront footage this translates into 8,172 feet private and 5,227 feet public (Table 4). However, in terms of acreage the percentages change. Seventy percent of the 85 acres along Ruston Way are privately-owned with the remaining 30 percent is in public ownership (Tables 6 and 7).

Twenty-two of the 26 acres in public ownership are submerged lands, contrasted with the fact that 34 of the 59 acres in private ownership are dry. It should be remembered that publicly and privately owned acreages represent the platted properties waterward of the Ruston Way right-of-way. For the most part these properties are submerged. However, the right-of-way is dry land, used for a bike path and parking. If the acreage within the right-of-way is added to the parcels in public ownership, the amount of dry land in this category would be greatly increased.

Adjacent Lands

The Ruston Way shoreline segment is bounded on the northwest by the Town of Ruston. Most of the ASARCO copper smelter is incorporated within this jurisdiction. The smelter, which is no longer in operation, is a prominent feature of the landscape and is visible along much of Ruston Way.

Lands to the west of the Ruston Way shoreline segment are utilized primarily for residential development, separated from Ruston Way by forested bluffs. At the northwesterly end, a shelf at the base of a steep slope supports about 30 private homes and the North End Wastewater Treatment Plant. This residential development is known as the Waterview neighborhood and has panoramic views of the Ruston Way shoreline and vistas beyond.

Residential development along the top of the bluff, which parallels Ruston Way, also has spectacular views. The bluff is broken at three points by Mason Gulch, Puget Gulch and Buckley Gulch. The three ravines have been left in a natural state and provide wildlife habitat as well as informal pedestrian trails.

The bluff drops down almost to sea level at the south end of Ruston Way. The Old Town neighborhood is located at this point and McCarver Street provides direct access from the commercial center of the neighborhood to the shoreline. Many of the homes and businesses in this area also have panoramic views of the shoreline and Commencement Bay.

SCHUSTER PARKWAY

The Schuster Parkway shoreline is characterized by a narrow strip of land backed by forested bluffs which rise steeply to 400 feet at the southern end. Schuster Parkway runs along the base of the bluff and a pedestrian pathway has been carved into the hillside along the road. The railroad right-of-way separates Schuster Parkway from the shoreline. For much of the distance there is little dry land seaward of the tracks. The exceptions are the areas at the north and south ends of Schuster Parkway (Figure 9).

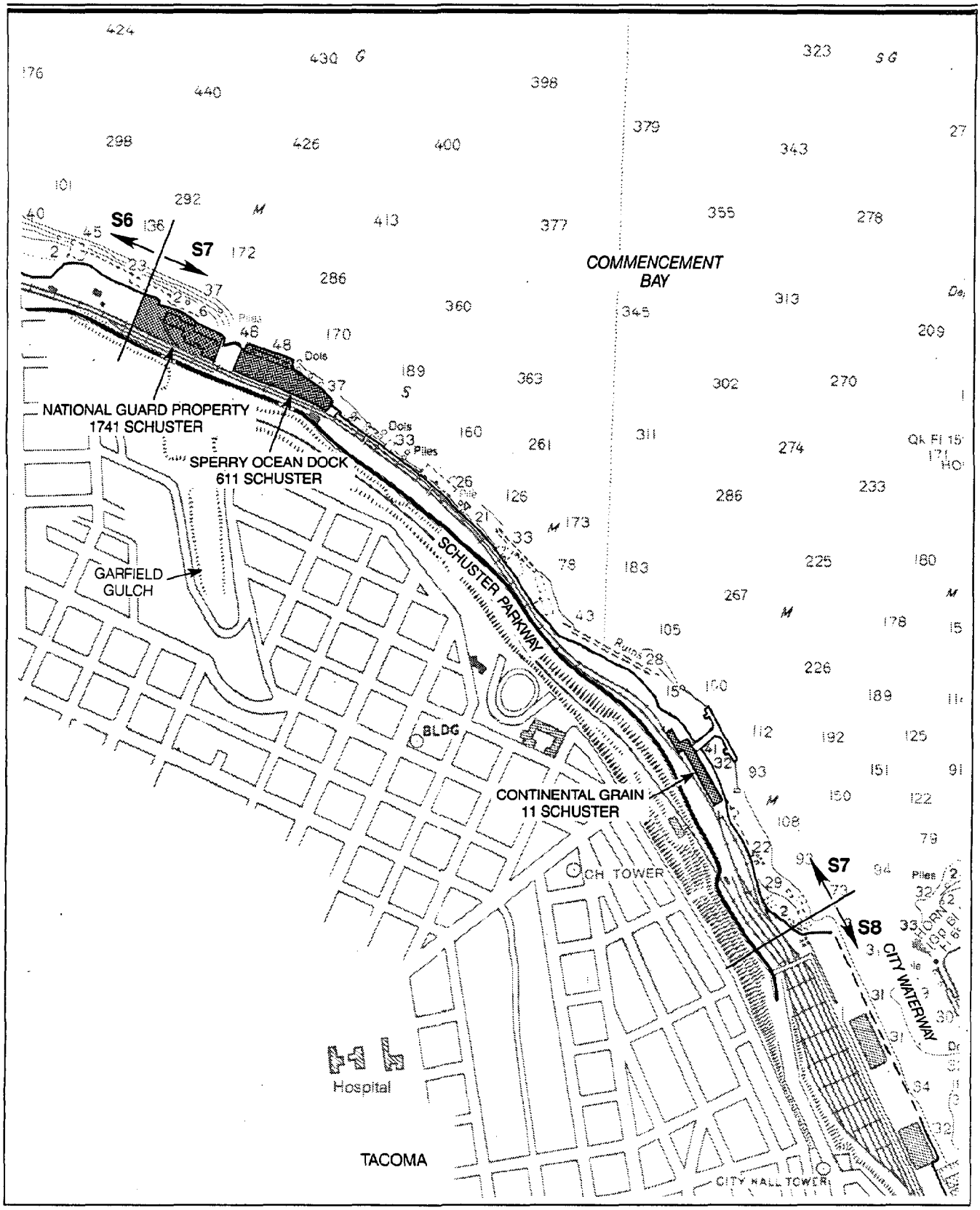


Figure 9.
Schuster Parkway
1987 Land Use

The land use inventory took into consideration the properties seaward of the railroad tracks. These lands have been platted and extend from the railroad right-of-way to the inner harbor line. At the north and south ends of Schuster Parkway, the parcels exhibit relatively large amounts of dry land. In between, the properties are primarily submerged lands.

The following discussion identifies the uses along Schuster Parkway, examines vacant land and ownership patterns, and describes the adjacent lands.

Waterfront Activity

Two activities were documented: the moorage of ships at the Sperry Ocean Dock and the loading of grain onto vessels at the Port of Tacoma dock. The first of these is water-dependent and the second is water-related. Portions of both these developments are over-the-water.

The two activities utilize 24 of the 55 acres (Tables 3 and 4). Twenty-two of the 24 acres are dry land. In terms of waterfront footage, the Sperry Ocean Dock and the Port of Tacoma grain elevator utilize 2,947 feet, or 39 percent of the 7,597 foot-long shoreline segment.

Vacant Land

Vacant shoreline properties account for 4,650 feet of the 7,597 foot Schuster Parkway segment. There are 31 vacant acres, of which 25 acres (81 percent) are dry land. Twenty-two of the vacant acres are owned by Burlington Northern and 7.7 acres by the federal government.

Ownership

The ownership picture for the platted lands seaward of the railroad right-of-way shows that the City of Tacoma does not own land in this area. The federal government owns 8 acres; the Port of Tacoma owns 21 acres; Burlington Northern owns 22 acres; and 4 acres are in other private ownership (Table 6).

Adjacent Lands

The forested slopes which rise above Schuster Parkway are in public ownership and are maintained as a permanent green belt. Garfield Gulch cuts through the bluff at the north end of the segment and a system of informal pedestrian trails provide a connection from the base of the slope to the residential neighborhood at the top. Many of the homes located above Schuster Parkway have panoramic views of Commencement Bay and the shoreline below.

CITY WATERWAY

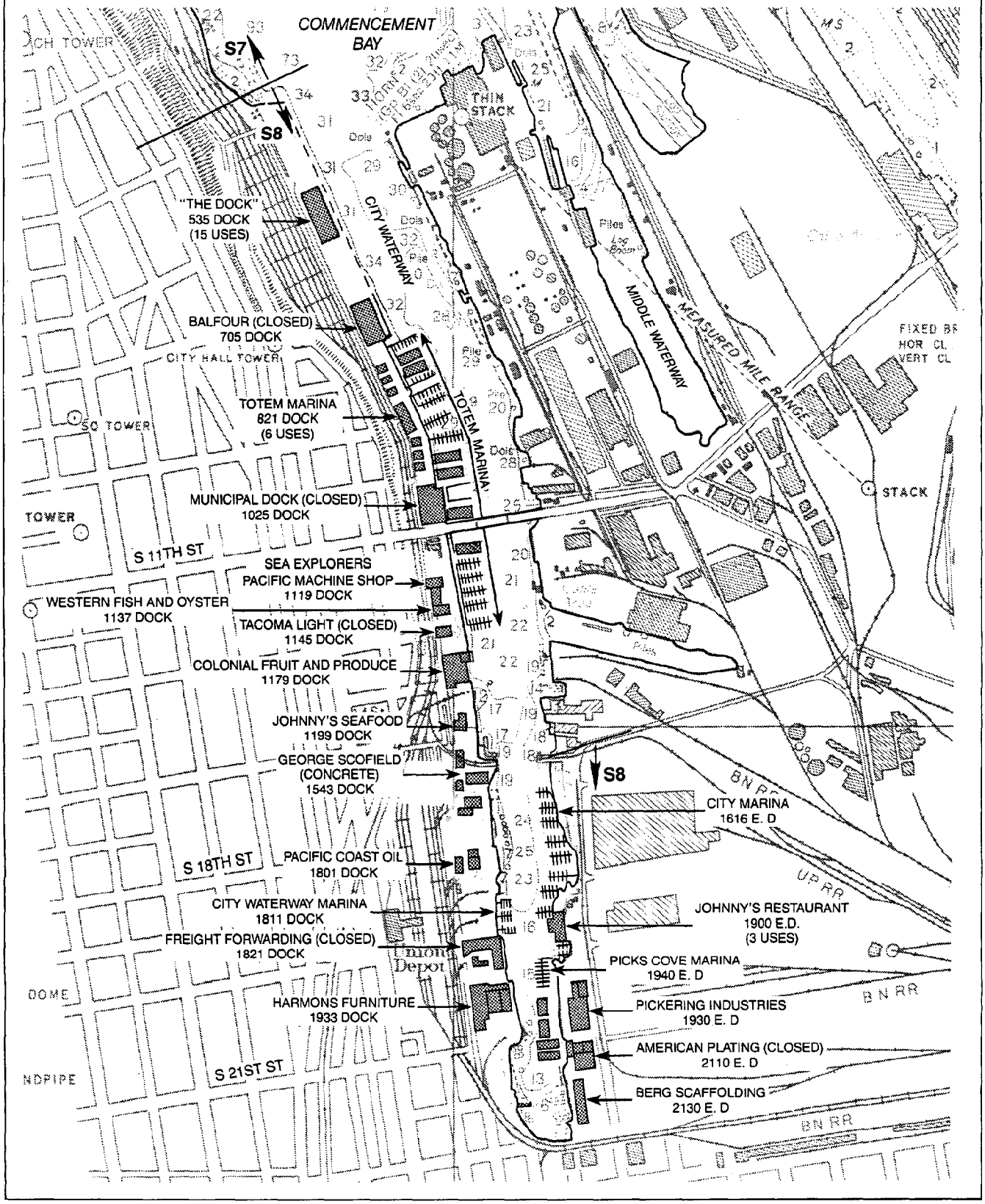
The City Waterway shoreline is located below a steep bluff on the eastern edge of the Tacoma central business district. The waterway is separated from the bluff by railroad tracks, the I-705 corridor and Dock Street. There is dry land available on the seaward side of Dock Street. This is also true for D Street on the eastern edge of the waterway. These waterfront properties have been platted and since there is a large dry land component, a wide range of uses have been possible (Figure 10).

The shoreline inventory concentrated on land uses occurring between Dock Street and D Street (south of S. 15th), and took into consideration permanent developments within the waterway. What follows is an analysis of existing uses, a discussion of vacant lands and ownership patterns, and a description of the adjacent lands.

Waterfront Activity

There are 43 uses on the City Waterway shoreline segment. Nine are water-dependent, and all of these are related to recreational and commercial boating. Characteristic water-dependent uses include marinas, boat charters and large vessel moorage.

Eight of the City Waterway activities are water-related. As with water-dependent uses, most of the water-related uses are associated with recreational and commercial boating. In fact, many of the water-related uses are



Soundings in Feet

SCALE IN FEET

0 500 1,000

N

Figure 10.
City Waterway
1987 Land Use

associated with water-dependent uses in multiple use, marina developments. Typical water-related uses include yacht brokerages and boating supply shops. Two water-related uses, the Scofield concrete plant and Johnny's Seafood, do not fall into a category with recreational boating.

Other uses along City Waterway include two restaurants, a park and 23 nonwater-dependent activities. The nonwater-dependent uses include a diverse range of businesses. There is a furniture and a cabinet manufacturer, a scaffolding company, professional offices, repair services, a produce distributor, an oil company, and general warehousing.

A total of 54 acres comprise the waterfront properties on the City Waterway shoreline. Forty three acres are dry and 11 acres are submerged. Properties which support a water-dependent element total 24 acres. This figure includes all of the multiple use developments because they support at least one water-dependent use. Five acres are utilized by water-related activities not included in multiple use developments and four acres are parks or road ends. An additional nine acres are utilized by nonwater-dependent uses not associated with a multiple use development (Table 3).

Vacant Land

In the City Waterway segment twelve properties with a total area of 12 acres are vacant. Ten acres of vacant property are dry and two acres are submerged (Table 3). Nineteen percent, or 2,148 feet of the 11,029 feet of waterfront in the City Waterway segment are affected. The vacant properties included in this accounting are primarily lands without structures. The American Plating Company is the only property that contains a structure. This business was closed by the Tacoma-Pierce County Health Department, and is factored into the vacancy inventory. Other properties have vacant buildings, but the survey team was able to document some use on the property. For example, there is a marina in front of the Municipal Dock building, a large vessel is moored to the Balfour Dock (Pacific Sound Freight Warehouse), and some general storage takes place in the former freight forwarding building at 1821

Dock. Since some portion of these properties support a use, the land was not considered vacant.

Ownership

Ownership patterns in the City Waterway segment show Burlington Northern owning 50 percent and other private interests holding 34 percent of the 54 available acres (Tables 6 and 7). The City of Tacoma owns 16 percent or nine acres. Five of these publicly owned acres are leased to private developers, one acre is a park and the remaining four acres are road-ends.

Burlington Northern owns 9 of the 12 vacant acres in the City Waterway segment. These lands include: the undeveloped land at the end of Dock Street north of "The Dock"; the former Northwest Plywood site; the former Scofield second batch plant site; and a parcel just north of the City Park at the end of City Waterway.

Adjacent Lands

The northern end of City Waterway is at the base of a high bluff. Major arterials and several rail lines separate the waterway from the bluff. In some cases the bluff is forested. In other places, it has been reconfigured by retaining walls, streets and structures. The Tacoma central business district is located at the top of the bluff and many views from this portion of the city look down at City Waterway. Towards the south end of City Waterway, the bluff tapers to sea level.

Industrial and heavy commercial development is characteristic of the south and east sides of the waterway. Typical uses include railroad operating yards, ship building operations, warehousing, and oil-tank farms. The Tacoma Dome is a four block walking distance from City Waterway.

CONCLUSIONS

The Ruston Way, Schuster Parkway, City Waterway shoreline is definitely an urban shoreline. However, each shoreline segment represents a distinctly different kind of urban shoreline.

Ruston Way is dominated by uses which provide the public an opportunity to enjoy the shoreline. Parks, restaurants and public amenities are its primary features. It is an area which provides both passive and active recreational opportunities and which is integrated with the adjacent residential community.

Although there are only two uses on Schuster Parkway, both are characteristic of a traditional working waterfront. The moorage of large vessels is considered water-dependent and the grain elevator is water-related. These uses require or benefit from a shoreline location. There are no public amenities or public ownerships along this waterfront segment.

City Waterway is dominated by water-dependent and water-related uses, but with two exceptions all these uses are associated with marinas and recreational boating. Therefore, it does not have the attributes of a traditional working waterfront, but does support businesses which require a waterfront location. There are also a large number of nonwater-dependent uses which represent a diverse mix of businesses, manufacturers, and services that give the shoreline a busy and varied atmosphere. In addition, public amenities are present and there is a small park. Topography and transportation corridors isolate City Waterway from the Tacoma central business district. Because there is only one direct pedestrian link to the downtown core (under the 11th Street Bridge), businesses along the waterfront are cut off from the mainstream of commercial activity and there is not much public use of the area.

An overriding characteristic of all three shoreline segments is the high incidence of vacant land. With approximately 50 percent of the waterfront

vacant, there is the potential for dramatic change to the character of the shoreline.

Section III:
1962-1987 Land Use Trend Analysis

SECTION III

1962 - 1987 LAND USE TREND ANALYSIS
WATERFRONT PROPERTIES
RUSTON WAY - SCHUSTER PARKWAY - CITY WATERWAY

SUMMARY

- The southwest shore of Commencement Bay has undergone a significant amount of transition since Nicholas De Linn built the first sawmill at the head of City Waterway in 1850. By the turn of the century the shoreline between Pt. Defiance and City Waterway had become a linear complex of industries. Typical uses included sawmills, granaries, wheat elevators, coal bunkers, foundries, warehouses, electrical companies and shipping terminals.

- The situation started to change in 1920 when the Port of Tacoma began extensive dredge and fill activities in the Puyallup River delta. In a short period of time, a large harbor area was created and gradually many of the waterfront industries relocated there. Not all of the closures along the Ruston Way, Schuster Parkway and City Waterway shorelines were the result of relocations. There were economic factors at work as well. A changing economy caused many of the businesses to close their doors permanently (See Section VI).

- A closer look at the changes which have taken place on the subject shoreline over the last 25 years, shows that the trend away from industrial and heavy commercial waterfront uses continues.

- There has been a high rate of land-use conversion on Ruston Way, Schuster Parkway and City Waterway. During the ten year period from 1962 to 1972, 23 percent of the properties went from one use to another, became vacant, or were vacant and became developed. Since then the rate of turn-over has increased. Between 1972 and 1982, 50 percent of the

properties underwent some form of land use change and in the five years between 1982 and 1987, 28 percent of the properties had already experienced a land use conversion.

- Overall, the number of water-dependent uses has remained constant. However, the type of water-dependent use has changed. The shift is away from industrial and heavy commercial water-dependent uses (log rafting, boat building, and large vessel moorage) to marinas and recreational boating services.

- While the number of water-dependent uses has remained the same over the last 25 years, the number of water-related uses has dropped 50 percent. In 1962 there were 22 water-related uses including lumber mills, flour mills, warehouses, fish stores, a smelter, and businesses which received goods by ship or barge. By 1987, only 11 water-related uses were recorded and most of these were associated with recreational boating.

- The shoreline as a whole has experienced an increase in the number of uses between 1962 and 1987. The increase can be attributed to the number of restaurants, parks and nonwater-dependent activities which have located in the area.

- The parks and restaurants are replacing the water-dependent and water-related uses which have vacated the Ruston Way shoreline. To a much lesser extent this is also true on City Waterway. The increase in the number of nonwater-dependent uses (primarily professional services) along these same shorelines, has not resulted in the utilization of much land. For the most part professional businesses tend to concentrate in office complexes.

- Overall the amount of vacant acreage on Ruston Way, Schuster Parkway and City Waterway has increased in the last 25 years, although this can be attributed largely to the recent ASARCO closure. In 1962 there were 78 vacant acres compared to 96 in 1987. If the ASARCO property is not

factored into the analysis, there would be 62 vacant acres in 1987, or 16 acres less than the 78 vacant acres recorded in 1962.

o Individual shoreline segments exhibit some distinctive trends:

Ruston Way

- On Ruston Way both water-dependent and water-related uses have declined. In 1962 and 1972 there were two boat builders and several uses associated with recreational boating. By 1982, there were no recreational boating facilities and only one of the boat builders was still in operation. In 1987 the remaining boat builder had ceased operation and the only water-dependent use on Ruston Way was the newly developed Fireboat Station.

- Water-related businesses also declined in number. Notable closures included the ASARCO smelter and the Dickman lumber mill as well as all of the water-related uses associated with recreational boating.

- In 1962, 60 percent of the available Ruston Way shoreline was used by water-dependent and water-related uses. By 1987, only 2 percent of the area supported such uses.

- On Ruston Way, parks and restaurants have replaced former shoreline activities. In 1962 there were no parks. By 1987 the City of Tacoma had acquired 22 acres. Together with approximately three acres in road-ends, public ownership was boosted to 30 percent of the Ruston Way shoreline . (Note: the figure does not include land within the Ruston right-of way).

- Park acquisition and restaurant development have kept the vacancy figures fairly constant on Ruston Way. Except for ASARCO which recently introduced 34 acres into the vacant category, about 35 percent of the Ruston Way shoreline has been vacant at any one time between 1962 and 1987.

Schuster Parkway

- With relatively few activities on Schuster Parkway, there has still been a decline in water-dependent uses. The closure of a long established boat building operation accounts for the decrease. However, the grain terminal introduced a water-related use to this shoreline segment. The large amount of land utilized by the grain terminal has resulted in a decrease in the amount of vacant land. In 1962 there were 44 vacant acres compared to 31 acres in 1987.

City Waterway

- In the last 25 years, there has been an increase in water-dependent uses on City Waterway. However, the type of use has changed. In 1962 the water-dependent uses included a log rafting operation, a tug boat terminal and a marina with boat repair services. By 1987 there were six marinas, two boat services, a harbor tour operation and a large vessel moorage.

- Between 1962 and 1987, the number of water-related uses declined 53 percent. Altogether, there were 17 water-related operations in 1962 including: storage warehouses, fish stores, concrete batch plants, freight forwarding operations, merchant shippers, a flour mill, a fuel depot, a lumber mill and a pressboard manufacturer. In 1987, the number of water-related uses had fallen to eight, and only two fish stores and one concrete batch plant remained of the water-related uses recorded in 1962. However, five new water-related uses were recorded in 1987, all of which were associated with recreational boating.

- The decline in industrial and heavy commercial water-related uses on City Waterway was accompanied by a similar decline in industrial and heavy commercial nonwater-dependent uses. In 1962, there was a toy manufacturer, a lumber and a plywood supply yard, an electro-

plating company, a fresh produce dealer, a trucking operation, two foundries, a steam plant, a storage facility, and a furniture manufacturer. In 1987 this picture had changed considerably. Of the uses listed above, only the furniture manufacturer, the fresh produce dealer and a foundry remained. However, a number of other nonwater-dependent uses had located on City Waterway, most of which were professional offices.

- In spite of the closures along City Waterway there has been an overall increase in the number of uses in the last 25 years. The increases can be accounted for by the large number of nonwater-dependent uses which located in a single office complex and the rise in recreational boating activities. Since these new nonwater-dependent uses are concentrated in a single building, little land area is required. Therefore, it is primarily recreational boating which is locating on properties vacated by industrial and heavy commercial uses.

- The introduction of new recreational boating facilities has not kept up with the rise in vacant lands. In 1962 there were 690 feet of unused shoreline on City Waterway. In 1987 this number had increased to 2,148 feet of waterfront. In terms of area, vacant land has increased from 4 to 12 acres. This means that in 1962, seven percent of the available land was not being utilized, compared to 22 percent in 1987.

o Conclusions: The long process of business closures involving industrial and heavy commercial uses on the subject shoreline, is almost complete. On Ruston Way the last of the water-dependent and water-related industrial uses have ceased operation. Parks, restaurants, and professional office buildings now lend an altogether different character to the waterfront. On City Waterway the process has been slower, but all industrial and heavy commercial uses have been declining, including the nonwater-dependent. Marinas and associated services have been the primary activity moving into vacated shoreline properties on City

Waterway. However, there have been a few other conversions: an old shipping warehouse is being used for an office complex, a restaurant now stands where a log rafting business once operated, and a City Park has been created in an area that was once used by a pressboard manufacturer.

It appears that the trend toward recreational boating in City Waterway has been accompanied by a trend away from such activities on Ruston Way. One tentative conclusion is that the protected moorage available in City Waterway is more suitable for marinas. However, as long as the more profitable industrial and commercial enterprises dominated City Waterway, the recreational boating services were forced to use available areas on Ruston Way. When industries began to vacate City Waterway properties, marinas were able to acquire a foothold. By 1987 there were no recreational boating services on Ruston Way.

Overall, between 1962 and 1987 there has been an increase in vacant land on the subject shoreline. On Ruston Way the increase can be attributed largely to the ASARCO closure. Otherwise, it appears that parks, restaurants and offices have kept pace with the vacancy rate for Ruston Way. On Schuster Parkway the overall incidence of vacant land declined due to the siting of the grain elevator, but increased with the recent closure of Tacoma Boat. It is on City Waterway that it is most evident that new uses are not occurring fast enough to replace closures. Since 1962 the amount of vacant shoreline in City Waterway has gone from 690 waterfront feet to 2,148 feet.

INTRODUCTION

The Ruston Way, Schuster Parkway, City Waterway shoreline of 1987 is not the same shoreline of the past. The parks and restaurants of Ruston Way are a relatively new phenomenon, as are the marinas and recreational boating facilities in City Waterway. It has been, and still is, a shoreline in transition. Before developing management strategies for this area it is important to understand the changes which have taken place and to determine the direction these changes are taking.

HISTORICAL PERSPECTIVE

The southwestern shore of Commencement Bay was the location of Tacoma's earliest industrial activity. In spite of the high bluffs and limited dry land area, early settlers were quick to take advantage of the deepwater offshore. Nicholas De Linn was the first to build a sawmill in 1850, at the head of City Waterway. By 1864 Job Carr had built his cabin in the vicinity of what was to become Old Tacoma and in 1869 the Hanson-Ackerson Mill located nearby on the site of present day Commencement Park and Garfield Gulch. Four years later, in 1873, Northern Pacific Railroad built a terminus on the shoreline near Stadium Way and the next year saw the incorporation of Old Tacoma. Development to the south of Old Tacoma was incorporated as New Tacoma in 1881 and it was not until 1884 that the "old" and "new" Tacomas were consolidated.

The limitation imposed by a lack of dry land area was somewhat overcome by Charles H. Jones, who in 1888 began to experiment with the placement of planking and pilings over water. Pilings proved to be the perfect support for the vibratory functions of a sawmill, and in 1889 Andrew Coon Young built a lumber mill almost entirely over-the-water near Old Tacoma. This mill, later to be called the Dickman Mill, finally closed in 1977, but the remnants of the extensive planking and piling supports are still visible. Between 1889 and 1920 there were at least a half-dozen, full-scale lumber operations on the present-day Ruston Way and Schuster Parkway shorelines.

It was not until 1890 that the Tacoma Land Company dredged the tidal channel under the bluffs of New Tacoma, and created City Waterway. By 1894 the dredged inlet had been bulwarked against erosion and had reached its present length and width. With adequate depth and protected waters, City Waterway quickly became a major shipping terminal. Several warehouses and dock storage facilities were built to accommodate this activity and businesses dependent upon goods delivered by ship or barge began to locate there.

By the turn of the century, the southwestern shore of Commencement Bay was a linear complex of industries. Typical uses included sawmills, granaries, wheat elevators, coal bunkers, foundries, warehouses, electrical companies and shipping terminals. Most of these shoreline activities were either dependent on, or benefitted from, a shoreline location.

The shoreline north of City Waterway to Pt. Defiance, was also undergoing gradual reconfiguration. Up until 1920 the road and rails servicing the waterfront industries were supported by a trellis, constructed of heavy pilings and timbers. The railroad had been trying to purchase a right-of-way from the Hanson-Ackerson Mill, in order to extend its line north to Pt. Defiance. In 1920 the mill changed hands and the new owners removed 120,000 cubic yards of bank from the bluff behind the mill and used it to create the dry land area that is now Commencement Park and the National Guard property. The railroad was then able to purchase a right-of-way along the base of the bluff and the filled area became the foundation for a new mill. In 1925 the City of Tacoma exercised its right-of-way for a waterfront road and the trellis was demolished in favor of fill and bank recontouring. The result was a dry land ledge at the base of the bluff and a waterfront road which became Schuster Parkway and Ruston Way.

The 1920's proved to be a watershed decade for the industries along the southwest shore of Commencement Bay. At this time the Port of Tacoma began extensive dredge and fill activities in the Puyallup River delta. As new land was created the Port was able to offer waterfront building sites with up-to-date shipping facilities, protected waterways and adequate road and

rail service. The newly created Port area did not have space constraints. The Ruston Way and Schuster Parkway shorelines began to deteriorate as industries relocated. The City Waterway shoreline did not experience as dramatic a conversion rate primarily because of its proximity to the Port of Tacoma and the fact that land was not as severely limited. Nevertheless, over time, the center of shipping activity shifted to the Port of Tacoma and the warehouses and docks along City Waterway were closed down.

Not all of the closures on Ruston Way, Schuster Parkway and City Waterway were the result of relocation to the Port area. Economic factors were involved as well. Section VI of this report examines the economic situation, both past and present.

The southwest shore of Commencement Bay is no longer Tacoma's center of maritime commerce. It has been a shoreline in transition since the 1920's. What is happening to this shoreline and the role it has assumed in recent years is the subject of the following trend analysis.

METHODS AND MATERIALS

Land use information for the years 1962, 1972 and 1982 was extracted from an inventory prepared by Robert F. Goodwin of Sea Grant at the University of Washington. Supplemental information necessitated some changes to this data base. The 1987 land use activities were inventoried by the survey team involved in the preparation of this study.

RESULTS: TREND ANALYSIS: 1962 - 1987

The Ruston Way, Schuster Parkway, and City Waterway activities recorded for the years 1962, 1972, 1982, and 1987 are presented in Appendix C. What follows is a discussion of general development trends that can be extracted from twenty-five years of shoreline activity data. The land use trends of the individual shoreline segments are discussed in separate sections.

General Findings

Waterfront Activities

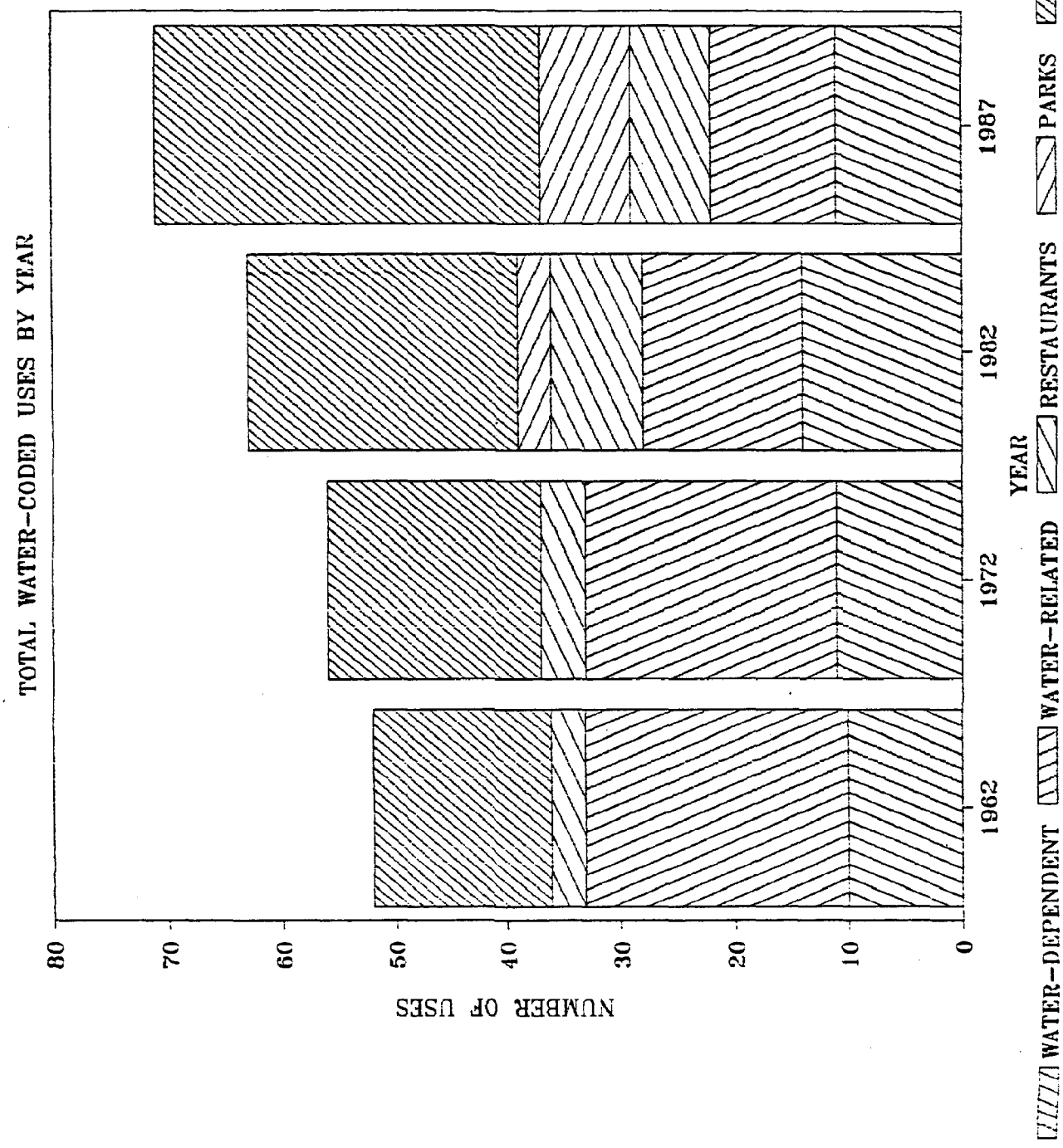
Historically waterfront activities along Ruston Way, Schuster Parkway and City Waterway have been in dynamic transition and the results of the trend analysis show that this process continues. The analysis which spans the last 25 years concludes that during this time period there were 74 land use conversions in an area which has 73 parcels of land. In some cases the property was converted from one use to another. In other cases a use was made of vacant land or an active property became vacant.

Conversions were lowest during the ten year period from 1962 to 1972. Seventeen of the 73 properties (23 percent) experienced some change in use. Over the next ten year period (1972-1982), close to 50 percent of the properties underwent some form of land use conversion. Figures for the last five years show that 28 percent (21 of 73 properties) have already undergone some change in land-use.

Since 1962, the total number of land use activities along Ruston Way, Schuster Parkway and City Waterway have increased from 52 to 70 (Figure 11). The number of water-dependent uses, however, has remained unchanged at 11. While there were the same number of water-dependent uses in 1987 as in 1962, the kinds of water-dependent uses have changed. The shift is away from industrial and heavy commercial water-dependent uses to those associated with recreational boating.

In 1962, typical water-dependent uses included log-rafting, boat building, and large vessel moorage. There were also two marinas on Ruston Way and one in City Waterway. By 1982 only one boat building facility was still in operation and almost all of the other water-dependent uses were associated with the five marinas which had located in City Waterway. By 1987 the boat-building operation had closed its doors and all water-dependent uses were involved with either marinas in City Waterway or the moorage of large vessels.

Figure 11. Total Water-Coded Uses by Year



While the number of water-dependent uses has remained the same over the last 25 years, the number of water-related uses has dropped 50 percent. In 1962 there were 22 water-related uses representing a wide range of activities. Among these were lumber mills, flour mills, warehouses, fish stores, a smelter and other businesses which received goods by boat or barge. Only one of the water-related uses was associated with a marina on Ruston Way. By 1982 this situation had changed dramatically. Not only had the number of water-related uses dropped from 22 to 14, but also, many of the active water-related uses at that time were associated with marinas which had located in City Waterway. The number of water-related uses continued to drop between 1982 and 1987, with primary losses being accounted for by fewer recreational boating services on Ruston Way and the closure of businesses receiving goods by ship or barge. In 1987, only 11 water-related uses were recorded along Ruston Way, Schuster Parkway and City Waterway, compared to 22 in 1962.

The overall increase in uses between 1962 and 1987 can be attributed to an increase in the number of restaurants, parks and nonwater-dependent uses. To a large extent these uses are replacing the activities which are no longer operating on the Ruston Way shoreline. In 1972, there were three restaurants, increasing to a high of eight in 1982. Only one of the eight was located outside Ruston Way. In 1987 there were seven restaurants, five of which were located on Ruston Way. Since 1962 seven parks have been created along the subject shoreline and all but one of the parks is on Ruston Way.

Nonwater-dependent uses have also increased in number. In 1962, there were 16 nonwater-dependent uses: 14 in City Waterway and 2 on Ruston Way. In 1987, there were 34 nonwater-dependent uses: 23 in City Waterway and 11 on Ruston Way. All of the non-water-dependent uses recorded on Ruston Way have been professional services located in three office buildings. In contrast, City Waterway has historically supported a diversity of nonwater-dependent uses, including toy and cabinet manufacturers, lumber and plywood supply yards, foundries, general warehousing, electroplating companies, fuel farms, coal suppliers, and trucking interests. Most of these nonwater-dependent uses are no longer there. The increase in nonwater-dependent uses along City

Waterway over the last 25 years, can be attributed to a single, multiple use development, that has 14 commercial retail and professional businesses.

As the numbers and types of uses changed along the southwest shore of Commencement Bay, the amount of land devoted to each category of land use changed. In 1962, 24 acres were devoted solely to water-dependent uses. Another 4 acres supported multiple use developments, with at least one water-dependent element. By 1987 these figures changed considerably. The number of acres devoted solely to a water-dependent use was 10 (a 58 percent decrease) and the number of acres supporting a multiple use development with at least one water-dependent element was 17 (a 76 percent increase). Combined, the land devoted to water-dependent uses and multiple uses with at least one water-dependent activity, has remained fairly constant. In 1962 there were 28 acres characterized by water-dependent uses and in 1987 there were 27 acres. This reflects the fact there were the same number of water-dependent uses (11) in 1962 as in 1987.

To some extent, the decline in water-related activities is reflected in the acreage figures for this use. In 1962, 69 acres supported water-related uses or multiple uses with water-related elements, compared to 29 acres in 1987. This represents a 58 percent decline. (Note: The acreage for multiple use developments, with both water-dependent and water-related uses, was accounted for in the previous discussion on water-dependent areas.)

Similarly, the increase in the number of restaurants and parks is also reflected in the increase in the amount of acreage utilized by these activities. In 1962 only one acre supported a restaurant and there were no parks. In 1987, 4 acres of shoreline property were being used solely for restaurants and the City of Tacoma had acquired 22 acres for parks. (Note: The acreage for multiple use developments which have a restaurant in addition to water-dependent or water-related uses is accounted for in the previous discussions on water-dependent or water-related areas.)

In spite of the two-fold increase in the number of nonwater-dependent uses, acreage devoted solely to nonwater-dependent uses did not change much between

1962 and 1987. The reason is that many of the new, nonwater-dependent uses were concentrated in multiple use developments with water-dependent or water-related aspects. Acreage for such multiple use developments has been accounted for in previous discussions on water-dependent and water-related areas. Acreage supporting only nonwater-dependent uses remained fairly constant between 1962 and 1987, averaging around 10 acres.

Vacant Land

Vacant properties increased in number between 1962 and 1987, resulting in an increase in the amount of vacant acreage (Figures 12 and 13). In 1962, there were 34 vacant properties (78 acres), and in 1987 there were 40 vacant properties (96 acres). Nevertheless, total vacant waterfront footage declined along the 6.2 mile stretch of shoreline, extending from Ruston Way to City Waterway. In 1962, 2.7 miles of shoreline were unused compared to 2.5 miles in 1987 (Figure 14). The reason the amount of vacant shoreline acreage increased, while the number of vacant waterfront feet decreased, can be explained by the fact that the closure of ASARCO contributed a great deal of acreage to the vacancy figure, relative to the amount of shoreline contributed. If ASARCO is removed from the analysis, 1962 had 16 more vacant acres than 1987. Therefore, without factoring in ASARCO, there has been a decrease in the amount of vacant acreage on the subject shoreline over the past 25 years.

The rate at which properties have become vacant varies over the twenty-five year study period. Between 1962 and 1972, seven percent of the 73 shoreline properties became vacant, compared to 14 percent between 1972 and 1982. This is double the rate of the previous decade. The five year period between 1982 and 1987 appears to be maintaining the higher rate at 11 percent and may exceed that in the next five years.

The above discussion focuses on development trends for the Ruston Way, Schuster Parkway and City Waterway as a whole. The following analysis will examine these shoreline segments separately, to determine individual shoreline dynamics and trends.

Figure 12. Total Vacant Land by Year

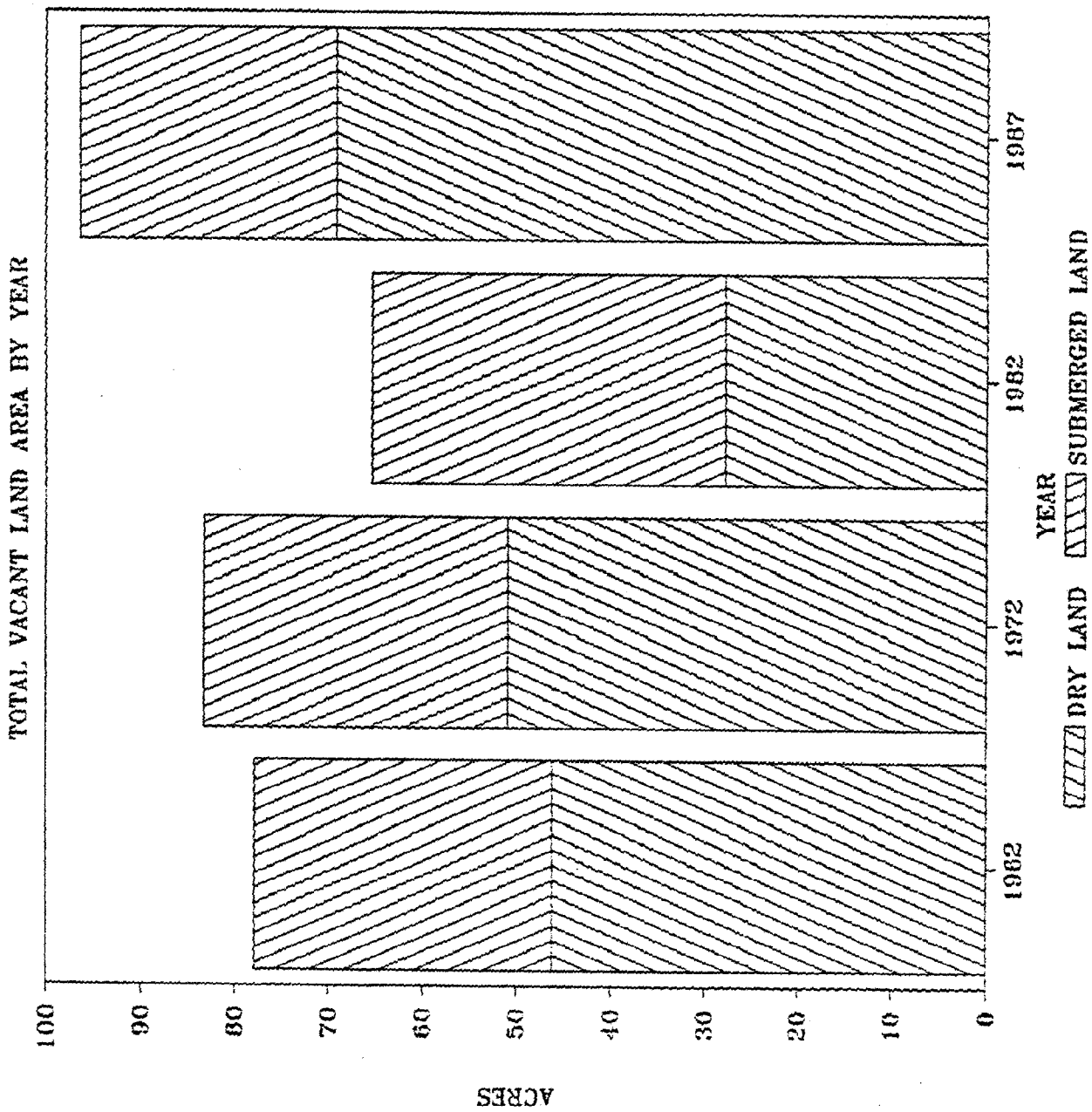


Figure 13. Number of Vacart Waterfront Properties by Year

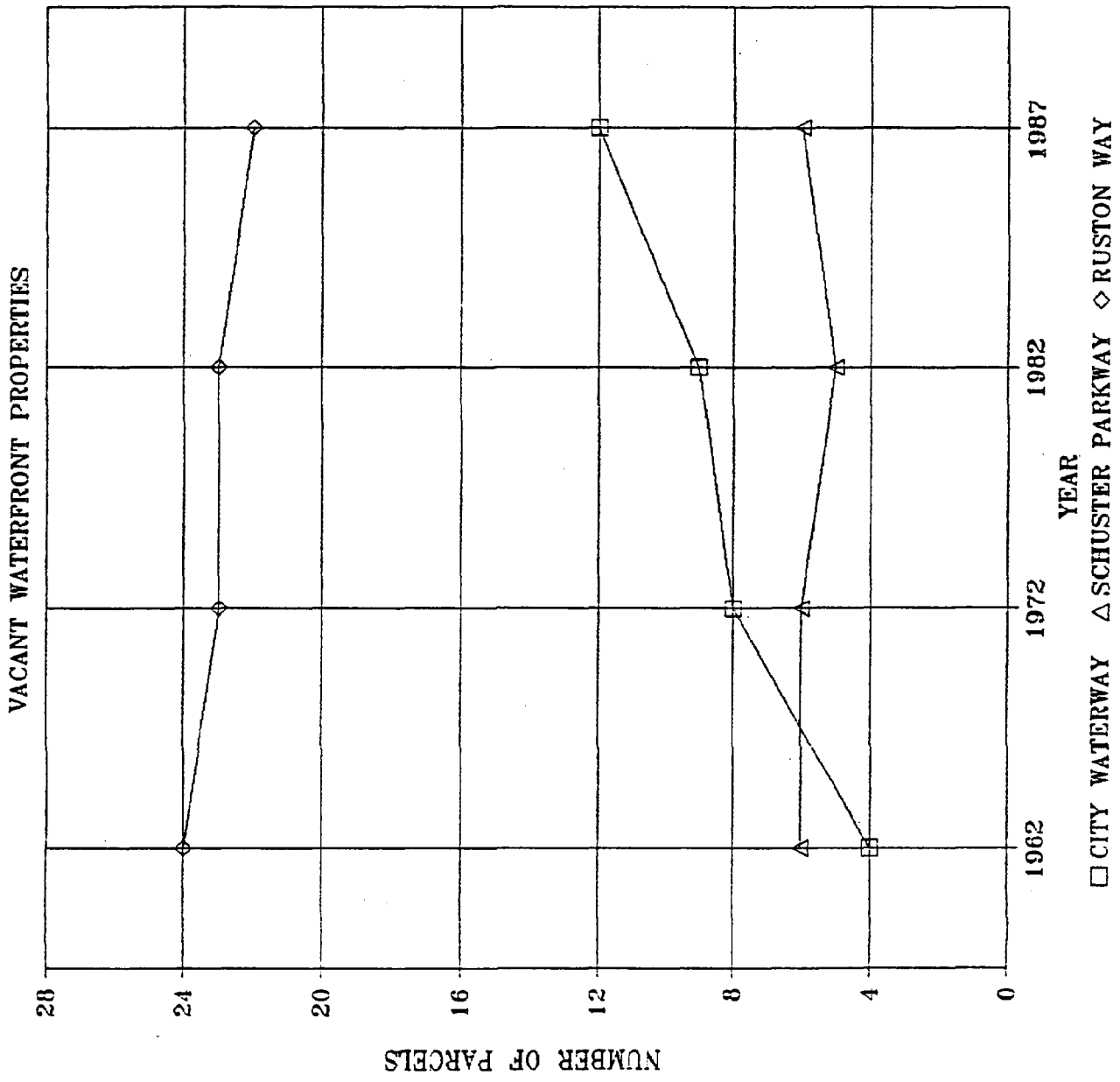
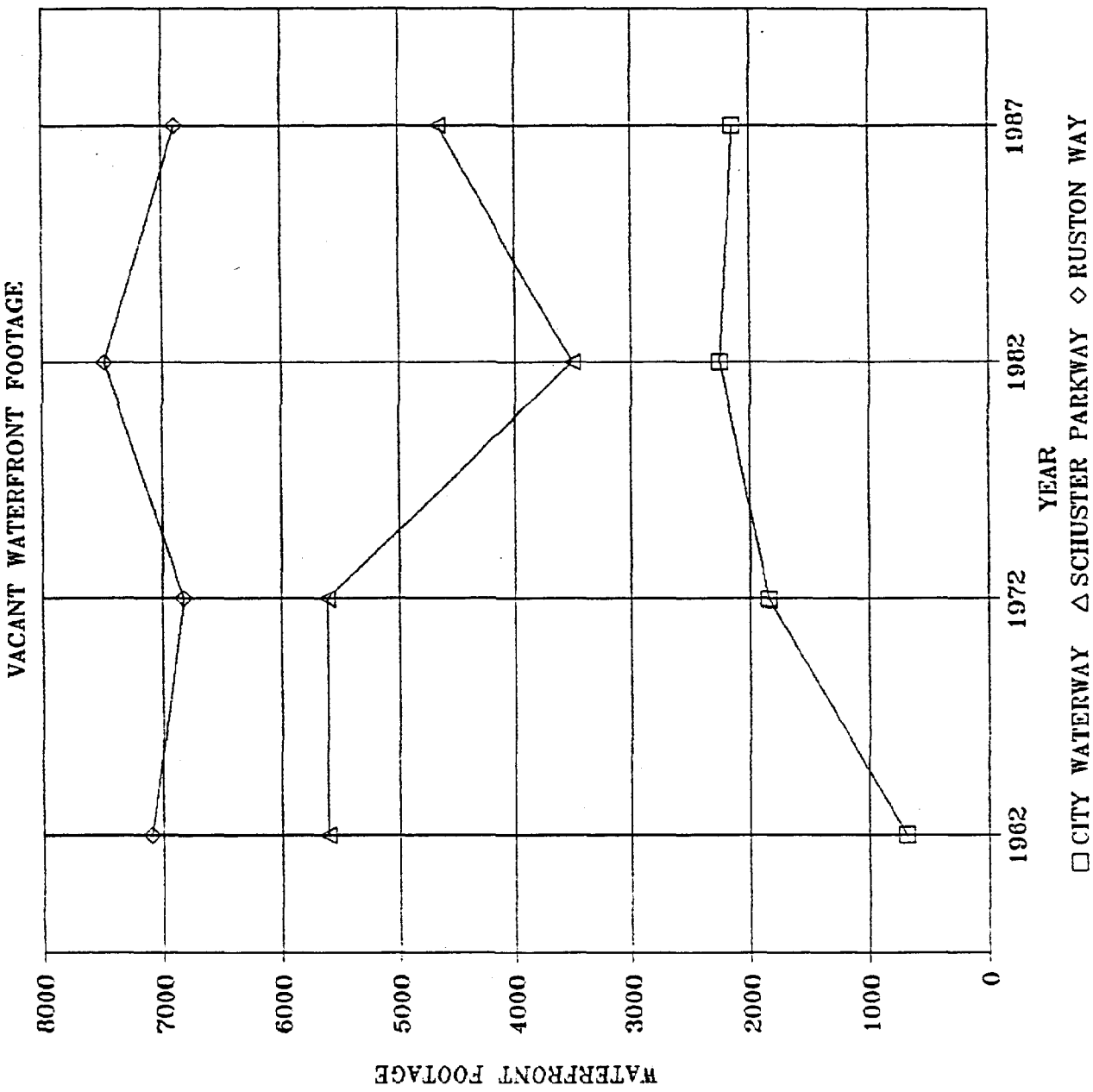


Figure 14. Vacant Waterfront Footage by Year.



Ruston Way

Waterfront Activities

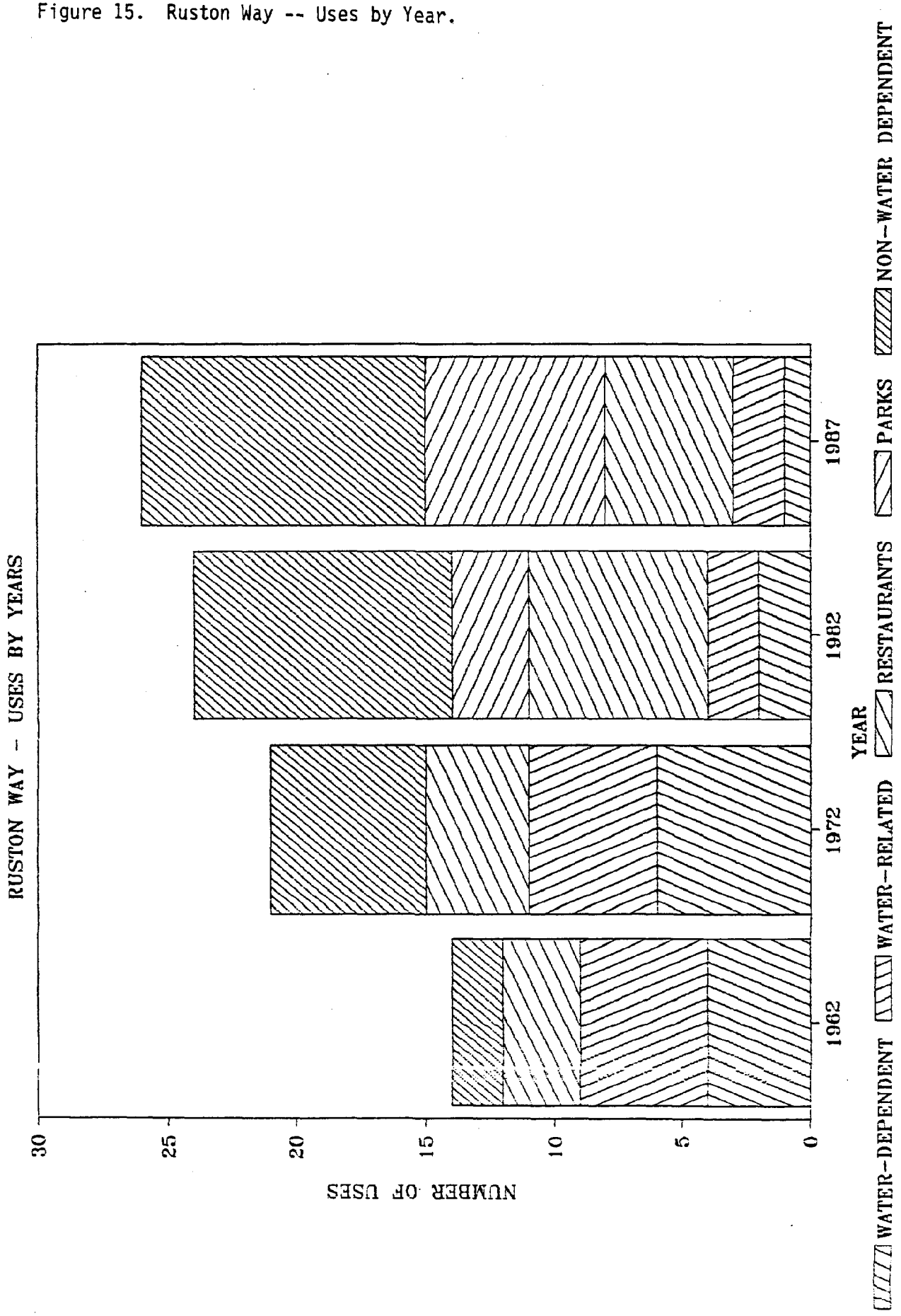
Properties along the Ruston Way shoreline have undergone a relatively high rate of conversion. Between 1962 and 1972, 13 percent of the 38 properties experienced some form of change. Either one use replaced another, a property became vacant, or a vacant property was developed. In the following decade the rate of conversion increased to 42 percent and in the five years between 1982 and 1987 changes in land use affected 26 percent of the properties..

In the last twenty-five years, the total number of waterfront uses increased along Ruston Way (Figure 15). The increase can be attributed to new restaurants, parks and nonwater-dependent uses. Over this same time period, the number of water-dependent and water-related uses decreased (Appendix C).

Between 1962 and 1987, there was a decrease in the number of water-dependent uses along Ruston Way. In 1962, there were four water-dependent uses: two boat builders, a boat locker, and a marina. By 1972, two additional water-dependent activities had located on Ruston Way: a boat launching facility and a charter-boat operation. Ten years later, in 1982, there were no recreational boating facilities on Ruston Way, and only one boat builder was still in operation. By 1987, the boat-builder had closed down and the fire-boat station was the only water-dependent use on Ruston Way.

The number of water-related uses have also decreased along Ruston Way, but the decrease has occurred only in the last 10 years. In 1962, there was a fish store, a shop selling boating goods, a yacht brokerage, a lumber mill, and a smelter. These uses were active until 1982. By that time, the shop selling boating goods and the lumber mill had closed down, but a bait shop and another yacht brokerage had located along Ruston Way. In 1987, all but the fish store and bait shop remained. In twenty-five years, the number of water-related uses on Ruston Way decreased from five to two. Two of the uses which closed down (the lumber mill and the smelter) were heavy industrial

Figure 15. Ruston Way -- Uses by Year.



water-related uses and the others were associated with recreational boating. As water-dependent and water-related uses declined on Ruston Way, so predictably did the acreage devoted to these uses. In 1962, 49 acres, or 60 percent of the available shoreline on Ruston Way, was utilized by water-dependent and water-related uses. In 1987, only 1.4 acres, or 2 percent of the area, supported such uses.

The activities which have been replacing the water-dependent and water-related uses along Ruston Way are restaurants, parks and non-water-dependent uses. From 1962 to 1987, restaurants increased from three to five. Over the same time period, non-water-dependent uses increased from two to eleven and the City of Tacoma created six parks. The increase in restaurants over the last 25 years is reflected in an increase in acreage allocated to this use. In 1962, only one acre was utilized by restaurants, compared to almost five acres, or six percent of the Ruston Way shoreline in 1987. (The five acres includes a property which supports a restaurant and a professional office building).

The growth in the number of parks accounts for the largest increase in acreage conversion. In 1962 there were no parks. By 1987, the City of Tacoma had acquired 22 acres. Together with approximately 3 acres in road-ends, almost 30 percent of available waterfront acreage on the Ruston Way shoreline had been placed in public ownership.

In 1962, the two nonwater-dependent activities were a building-contractor and a architect. By 1987 the number of nonwater-dependent uses had increased to 11, accounting for 44 percent of the activities on the Ruston Way shoreline. All of the nonwater-dependent activities locating on Ruston Way in the last 25 years have been professional services. With the exception of the building-contractor, all of the nonwater-dependent uses have been concentrated in one of the three professional office buildings along Ruston Way. Therefore, the 82 percent growth in the number of nonwater-dependent uses is not reflected in a similar pattern of increasing acreage. The amount of acreage utilized by nonwater-dependent uses on Ruston Way does not exceed an acre.

Vacant Land

Along Ruston Way, the number of vacant parcels has declined since 1962. There were 24 vacant parcels in 1962, representing 1.3 miles of shoreline. In 1987 there were 22 vacant parcels with approximately the same amount of shoreline. The real difference between the 1962 and the 1987 vacancy figures shows up when considering acreage. There were 30 vacant acres in 1962, compared to 54 in 1987 (Figure 16). The increase can be attributed to the closure of ASARCO which put 34 acres into the vacant category. If ASARCO is removed from the analysis, only 20 acres, or 35 percent of the Ruston Way shoreline would be vacant. This is the same amount of vacant acreage as recorded in 1962. The fact that vacant acreage has not increased along Ruston Way (south of ASARCO), over the last 25 years, can be attributed to the active role the City of Tacoma has taken in acquiring and converting vacant land into parks.

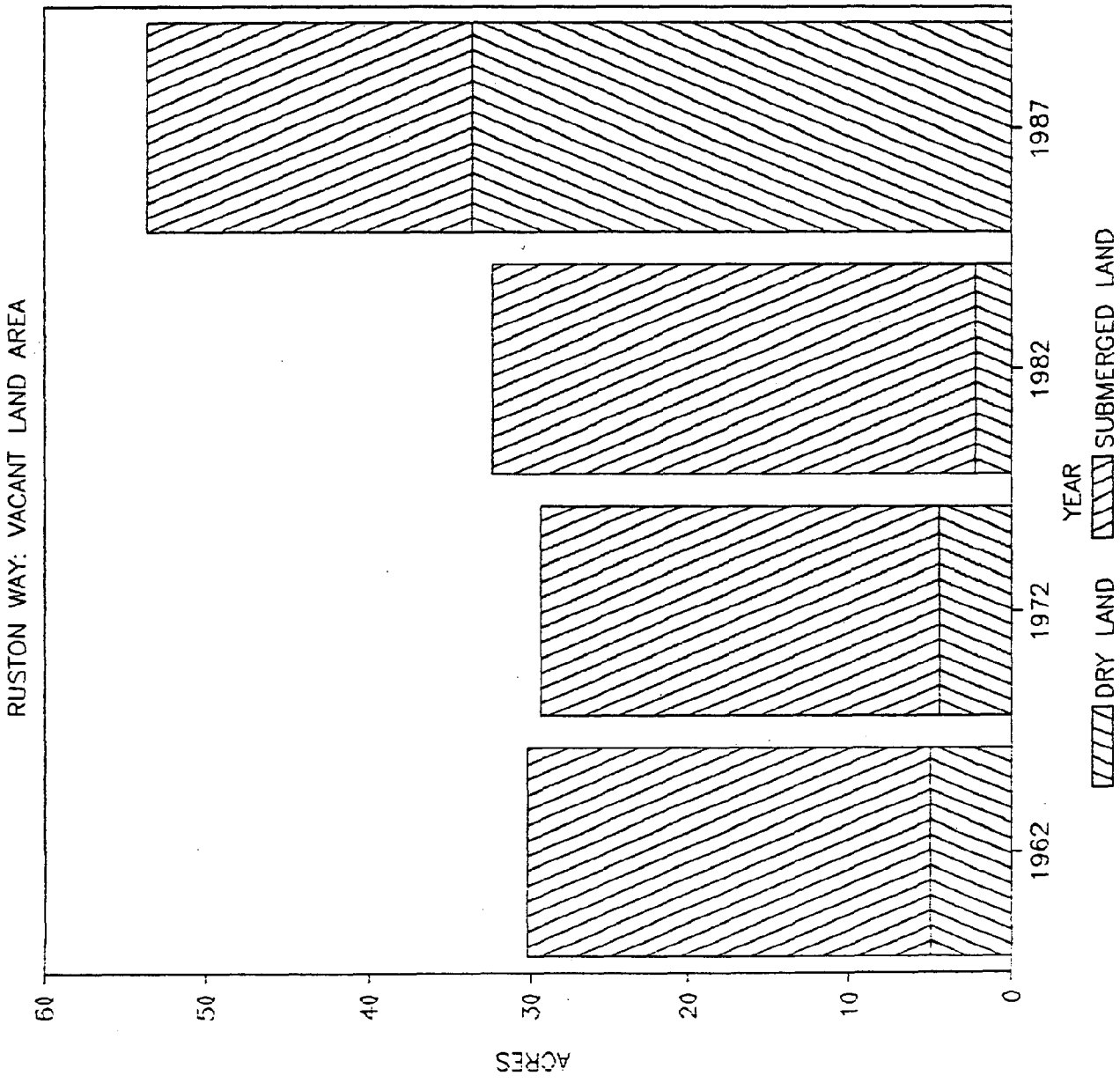
The rate at which vacancies have occurred on Ruston Way has varied over the years. Between 1962 and 1972 only three percent of the properties became vacant, compared to 16 percent between 1972 and 1982. In the five years which followed, the vacancy rate was eight percent. Nevertheless, the rate at which vacant properties were developed appears to have kept up with the rate at which properties became vacant. For example, between 1972 and 1982 six properties became vacant, but over the same period of time, six vacant properties were developed. In the 5 years between 1982 and 1987, four properties became vacant, while three vacant properties were developed.

Schuster Parkway

Waterfront Activities

Between 1962 and 1972, the Schuster Parkway shoreline supported two water-dependent uses; a boat-building operation (Tacoma Boat) and vessel moorage at the Sperry Ocean Dock. By 1982, the Port of Tacoma had built a grain elevator at the south-end of Schuster Parkway. A grain elevator is

Figure 16. Ruston WAy -- Vacant Land Area.



considered a water-related use. Therefore, in 1982 two water-dependent uses and a water-related use occupied the Schuster Parkway shoreline. In terms of area, these activities utilized 32 acres, or 58 percent of the 55 available acres along Schuster Parkway. By 1987, the boat building operation had closed its doors, leaving only 24 acres, or 44 percent of the shoreline segment in use (Figure 17 and Appendix C).

Vacant Land

In 1962 and 1972, before the grain elevator was constructed, there were 44 vacant acres along Schuster Parkway. In 1982, the grain elevator took 21 acres out of the vacant category, dropping the total vacant land figure from 44 to 23 acres. Vacant land increased from 23 acres to 31 acres with the closure of Tacoma Boat. In 1987, 56 percent of the Schuster Parkway shoreline was vacant (Figure 18).

City Waterway

Waterfront Activities

City Waterway has experienced a great deal of land-use activity over the last twenty-five years. In the ten years between 1962 and 1972, 44 percent of the 37 properties went from one use to another, became vacant or went from vacant to developed. Between 1972 and 1982, the rate of land use conversion increased to 70 percent and in the five years between 1982 and 1987, 37 percent of the properties have undergone some change in land use.

Since 1962, the number of uses along City Waterway have increased (Figure 19). In that year there were 36 recorded uses compared to 43 in 1987. The increases have occurred in all use categories, except water-related. (See Appendix C)

The number of water-dependent uses increased from five to nine between 1962 and 1987, and the type of water-dependent use changed. In 1962, two properties supported a log rafting operation, and there was a marina, a tug boat

Figure 17. Schuster Parkway -- Uses by Year.

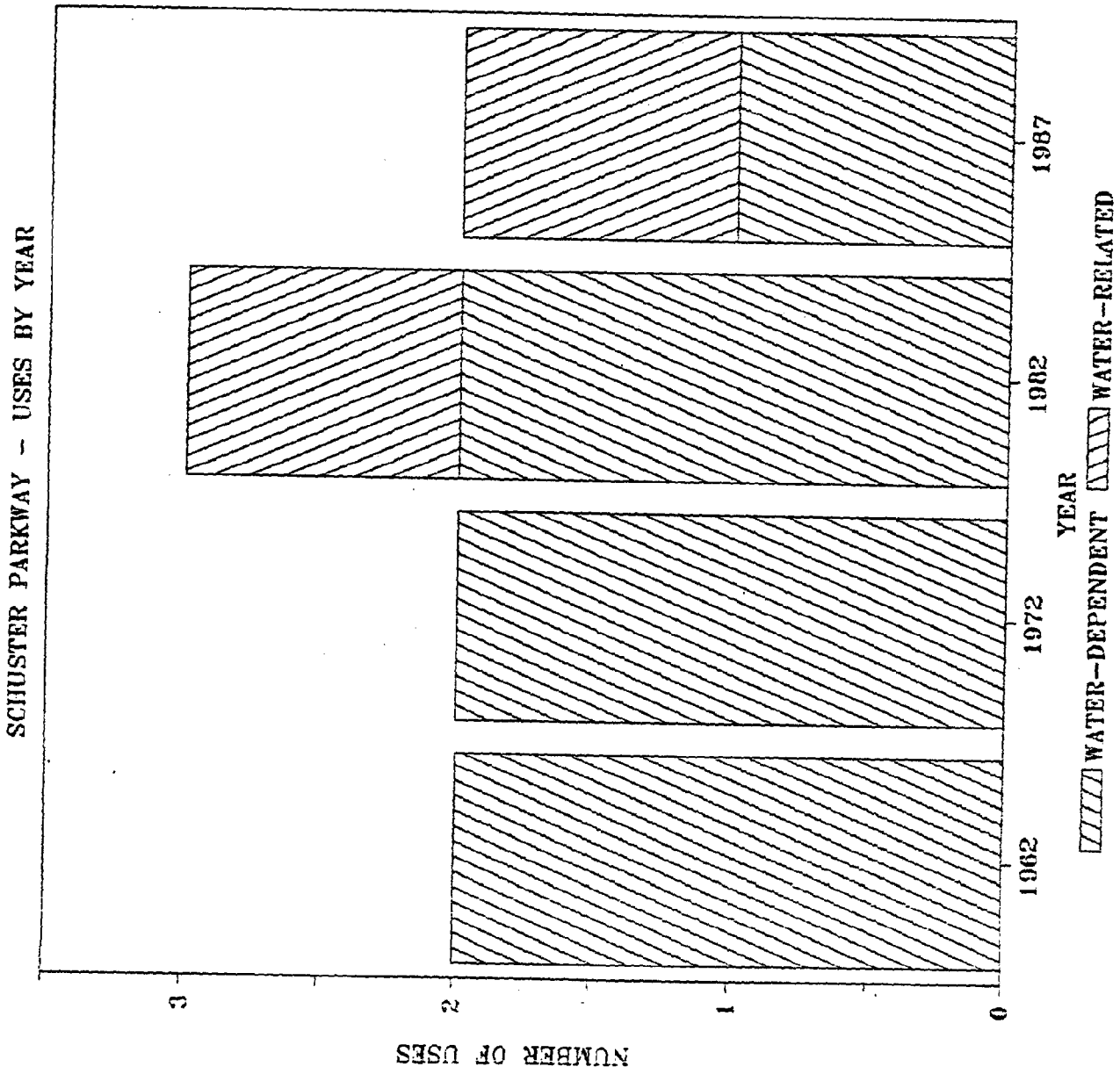


Figure 18. Schuster Parkway -- Vacant Land Area.

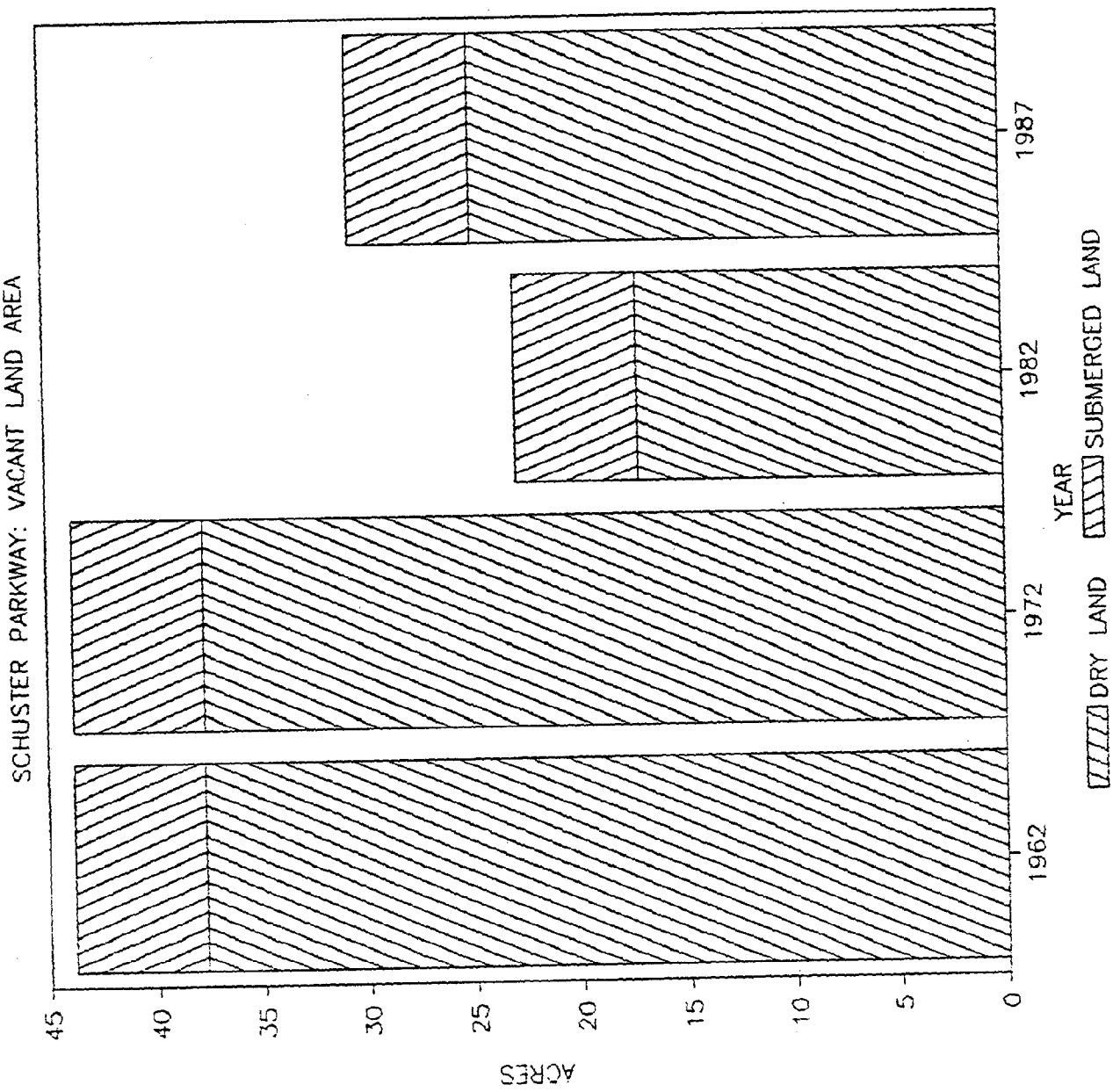
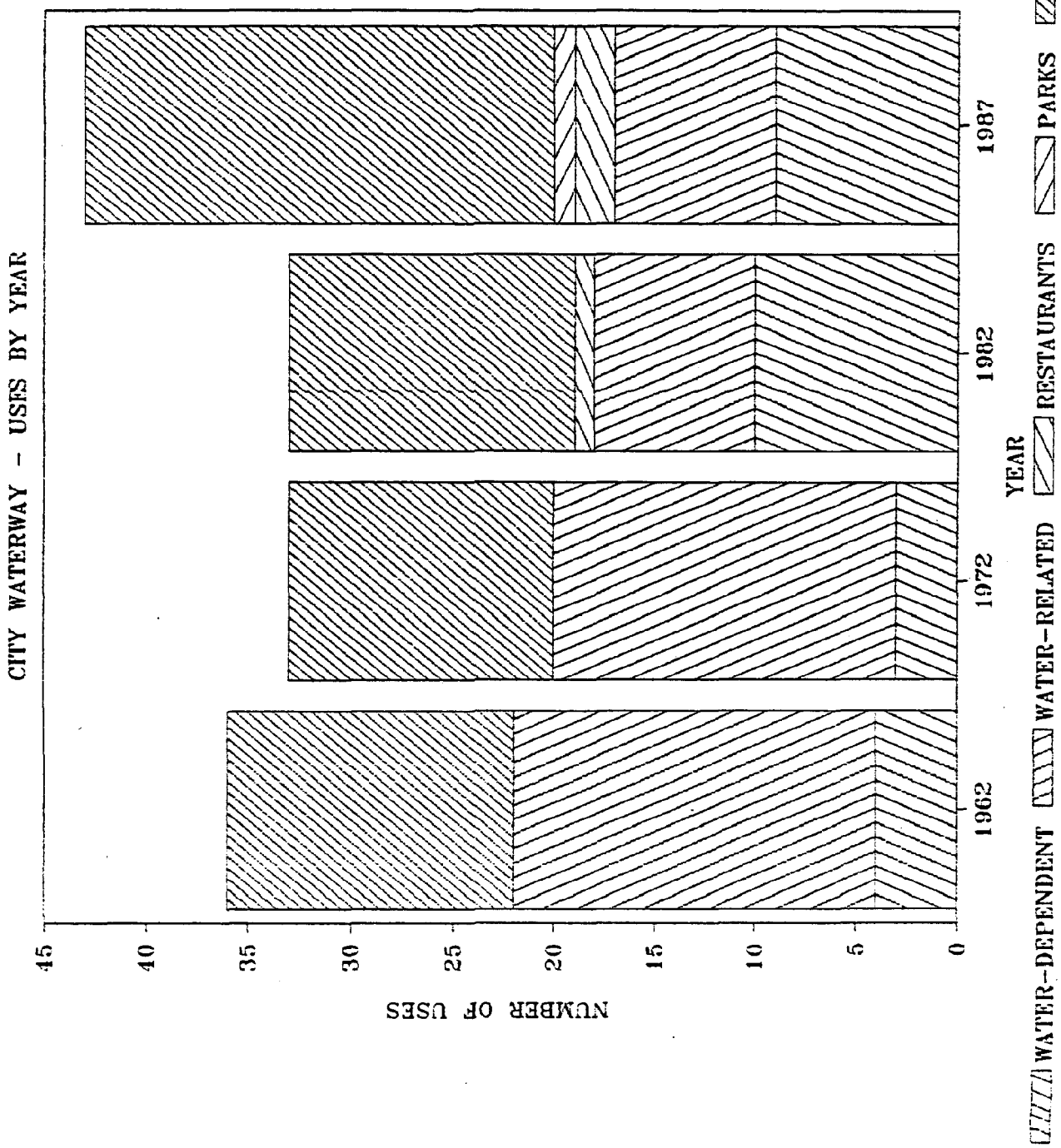


Figure 19. City Waterway -- Uses by Year.



terminal, and a boat repair shop. By 1982, there were ten water-dependent uses along City Waterway, four marinas and six activities associated with recreational boating. In 1987, the number of water-dependent uses had dropped to nine: six marinas, two boat brokerages, one harbor tour service and one large vessel moorage.

The amount of acreage utilized by water-dependent uses has increased proportionately to the increase in the number of water-dependent uses. Between 1962 and 1987 there was a 44 percent increase in the number of water-dependent uses (from 5 to 9 uses). During that same time period, the acreage occupied by water-dependent uses increased 54 percent (from 11 to 21 acres). Or from another perspective; in 1962 water-dependent uses accounted for 20 percent of the City Waterway segment, compared to 40 percent in 1987.

Between 1962 and 1987, the number of water-related uses on City Waterway dropped from 17 to 8 (a 53 percent decline). In 1962, water-related uses outnumbered all other categories of uses and represented a wide range of services. There was a lumber mill, a flour mill, two concrete batch plants, a plywood company, a pressboard manufacturer, a freight forwarding operation, a fish store, a fresh produce dealer, a central heating plant and several warehouses. All of these received goods by ship or barge. By 1987 the number of water-related uses had fallen behind both water-dependent and nonwater-dependent uses.

Between 1962 and 1972, the numbers for water-related uses did not change much. In 1962 there were 17 water-related uses and in 1972 there were 16. In contrast, over the next ten years, 50 percent of the water-related uses ceased operation. Water-related businesses which had closed down during the ten year period included three warehouses, the flour mill, the pressboard manufacturer, the central heating plant and the freight forwarding business. The fresh produce dealer continued to operate, but it became a nonwater-dependent use because fruits and vegetables were delivered by truck rather than barge.

In spite of the decline in historical water-related uses of the waterfront, two new water-related uses were recorded in 1982. Both involved recreational boat sales. In 1987, there was an additional boat dealership, but the large plywood company had vacated its City Waterway location and one of the concrete batch plants had ceased operation. By 1987, the only water-related uses on City Waterway (which were not associated with recreational boating) were two fish stores and a concrete batch plant. The five water-related uses associated with recreational boating included three yacht brokerages, a boat service and a bait and tackle shop.

The acreage figures for each use category, clearly reflect the decline in the number of water-related uses (see Appendix C4). In 1962, there were 26 acres in the water-related category, compared to 8 acres in 1987.

Of the 26 water-related acres recorded in 1962, half supported a single water-related use. Since these 13 acres involved seven parcels, there were seven water-related uses involved. The other half of the 26 acres consisted of six parcels, each of which supported a multiple use development, with at least one water-related element. Altogether, there were ten water-related uses distributed among the six multiple use parcels. None of the water-related uses recorded in 1962 were associated with recreational boating. During this same time period, only one water-related use was part of a multiple use development that had a water-dependent element. The acreage for this development was included under the previous discussion of water-dependent acreage on City Waterway.

By 1987, there were only eight acres categorized as water-related. Five of these eight acres consisted of two properties, each of which supported a single water-related use. One acre was occupied by a fish store and four acres by the concrete batch plant. Three of the eight acres categorized as water-related in 1987, supported a single, multiple use development which had a water-related element. Therefore, the eight acres categorized as water-related supported three of the eight water-related uses recorded in 1987. The remaining eight water-related uses were part of multiple use developments which also had water-dependent elements. Without exception these multiple

use developments were recreational boating services, built around marinas. Acreage for these uses was accounted for under the previous discussion of water-dependent acreage on City Waterway.

On City Waterway, there was very little change during the 25-year period in the number of restaurants and parks. By 1982 there was one restaurant and another was introduced before 1987 as part of a multiple use development. In addition, the first City Waterway park was created between 1982 and 1987 in conjunction with some street improvements and landscaping.

It is the increase in nonwater-dependent uses that is largely responsible for the overall increase in uses along City Waterway. In 1987, there were nine more nonwater-dependent uses than there were in 1962. Historically, a wide range of nonwater-dependent manufacturers and services have located on City Waterway. Representative activities which operated between 1962 and 1982, include lumber and plywood supply yards, an electroplating company, two foundries, a steam plant, a chemical laboratory, a scaffolding business, a fuel supply depot, a toy company, a cabinet maker, a furniture manufacturer, an architect and a surveyor. The latter two nonwater-dependent uses were the only professional services on City Waterway until 1986 when a large multiple use development was constructed. By 1987, there were nine professional offices located in the multiple use development, along with four nonwater-dependent retail businesses, a restaurant, and a company that offered harbor tours.

By the time new professional, nonwater-dependent uses were being introduced to City Waterway, a number of the industrial and heavy commercial, nonwater-dependent uses had ceased operation. Among these were the electroplating company, the toy manufacturer, the lumber and plywood yards, the steam plant, the chemical laboratory, the fuel supply depot and one of the foundries. It appears that the industrial and heavy commercial, nonwater-dependent uses, have followed the same pattern of decline on City Waterway, as the industrial and commercial, water-related uses.

The overall increase in the number of nonwater-dependent uses has not been accompanied by a comparable increase in the number of acres characterized by these uses. In fact, acreage utilized by non-water-dependent uses has dropped from 13 acres in 1962 to 9 acres in 1987. Yet, over this same time period, nonwater-dependent uses increased from 14 to 23. The reason for this disparity is that new nonwater-dependent uses do not have the same space requirements as former nonwater-dependent uses. The manufacturing and industrial nonwater-dependent uses of the past needed room for their operations as well as for deliveries and storage. Professional offices do not have these same requirements.

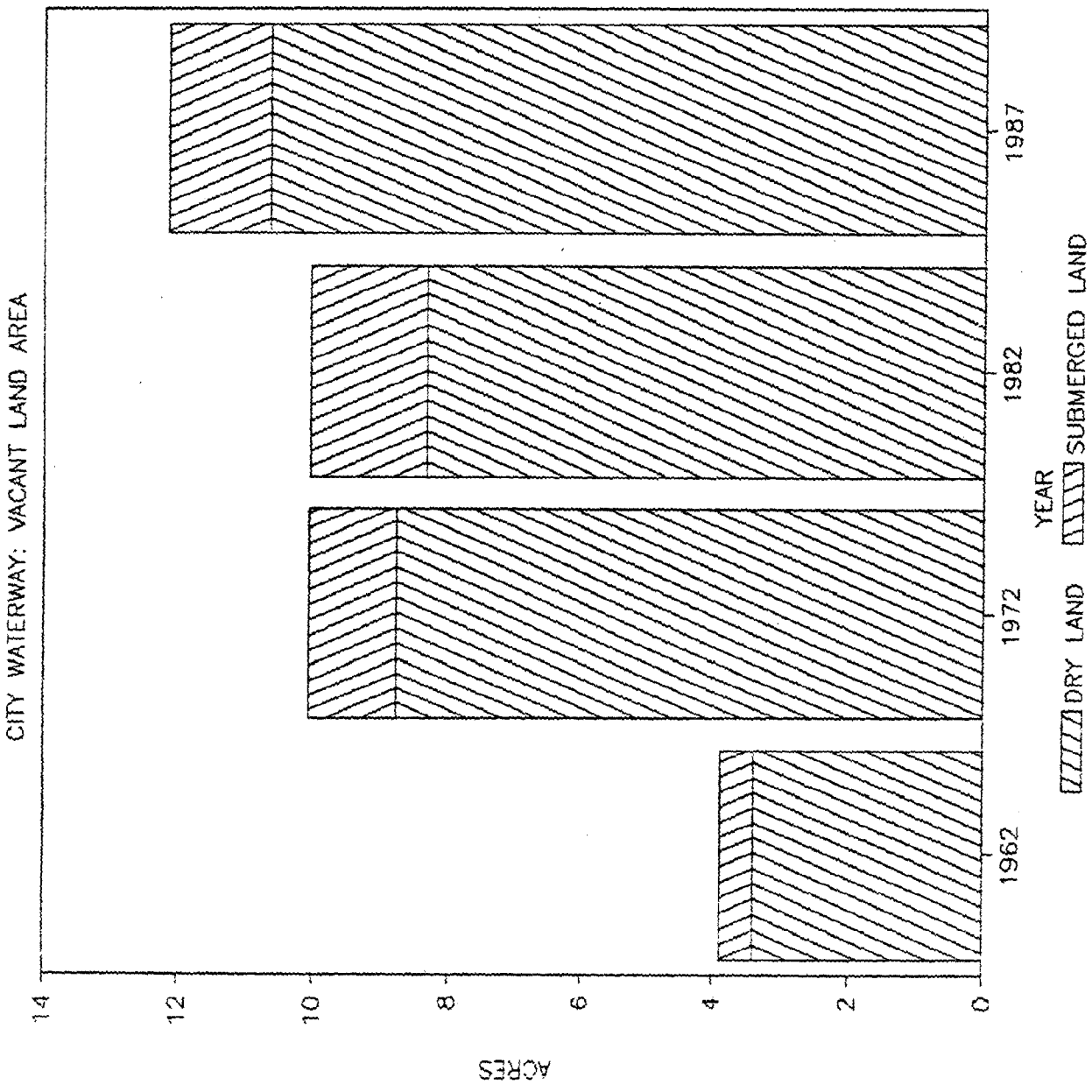
Vacant Land

The number of vacant parcels in the City Waterway segment have increased from four to twelve since 1962. In terms of waterfront footage this has meant an increase from 690 feet to 2,148 feet of vacant shoreline. In 1962, 4 acres or seven percent of the shoreline area in the City Waterway segment was vacant. In 1987, 12 acres or 22 percent of the area was vacant (Figure 20).

The trend toward increasing vacancy occurred most significantly between 1962 and 1972. During that period, the number of vacant acres increased from 4 to 10. Between 1972 and 1982, the rate of vacancy appears to have slowed, primarily because the number of parcels which became vacant equaled the number of vacant parcels which were developed. Between 1982 and 1987, four parcels became vacant, while only two vacant parcels were developed. The result was 2 more acres introduced into the vacant land category in the last 5 years.

From the previous analysis of waterfront activity it appears that the major cause of vacancy is the closure of water-related business which received goods by ship or barge, and the closure of nonwater-dependent, industrial and heavy commercial enterprises. To some extent, lands vacated by these activities have been converted to other uses. For example a lumber yard was converted to a marina; a plywood supply yard was made use of by a scaffolding business and a former warehouse was transformed into a multiple-use profes-

Figure 20. City Waterway -- Vacant Land Area.



sional building. However, several properties formerly occupied by water-related and nonwater-dependent uses remain vacant. Included in this category are the properties which supported the electroplating company, the central heating plant, the pressboard manufacturer, one of the concrete batch plants, the plywood company and two former warehouses which have since been torn down.

It should be noted that almost 2 acres of the City Waterway segment remained consecutively vacant from 1962 through 1987. In other words, no activity was recorded on these lands over the 25 year study period.

CONCLUSION

Properties along the subject shoreline have experienced high rates of conversion from one use to another. The trend has clearly been away from the industrial and heavy commercial uses of the past, to more people oriented activities, recreational boating, professional services and retail establishments.

Since 1962, Ruston Way has lost several industrial uses, including two boat builders, a lumber mill and a smelter. Over the same time period, a marina and five other uses associated with recreational boating closed down along Ruston Way. City Waterway also experienced a loss of industrial uses. Among them, a log rafting operation, a lumber mill, a flour mill, a concrete batch plant, a plywood company, a pressboard manufacturer, a central heating plant, a steam plant, an electroplating company, two foundries, a chemical laboratory and a toy maker. Schuster Parkway lost a boat building operation.

The uses that are moving into the area to replace the ones that have closed down represent a range of lighter commercial activities and public amenities. The predominant uses, in terms of acreage along Ruston Way, are now parks and restaurants. Professional services outnumber the parks and restaurants but utilize very little land since they are concentrated in three office complexes.

In contrast, City Waterway still has some industrial and manufacturing uses, but marinas and recreational boating have become prevalent. It appears, the closure or relocation of industrial and heavy commercial uses along the entire southwest shore of Commencement Bay was accompanied by a shift in recreational boating activities from Ruston Way to City Waterway. As the industrial and heavy commercial uses moved out of City Waterway, marinas and associated activities moved in to take their place. The protected channel of City Waterway is more suitable for marinas than the exposed shore of Ruston Way and once the businesses serviced by ship or barge had moved out, large vessel movement no longer posed a threat to small boats. The result was evidently a competitive advantage for marinas on City Waterway, leading to the eventual closure of all such enterprises on Ruston Way.

Vacant acreage is higher in 1987 than it was in 1962. However, there has actually been a decrease in the number of waterfront feet that are vacant. The reason for this apparent discrepancy is the fact that the recent closure of ASARCO put many acres of land into the vacant category relative to the amount of waterfront contributed.

If the vacant ASARCO property is not factored into the analysis, the amount of vacant land on the Ruston Way shoreline has remained fairly constant (20 acres). It appears that the development of parks has offset the incidence of vacancy along this shoreline. This is not true for City Waterway. In spite of new developments (primarily marinas) the amount of vacant land is increasing.

The trend away from Tacoma's historical use of this area appears to be continuing. Although the process has been gradual, there is clearly a movement away from the heavy industrial water-dependent, water-related and nonwater-dependent uses of the past. The people oriented parks and restaurants, the recreational boating facilities, the office parks and the retail outlets are becoming more and more a feature of this shoreline. The regulations support and encourage this trend, and given proper market conditions there is every reason to believe this trend will continue.

Section IV:
Shoreline Permit Activity and Trends

SECTION IV

SHORELINE PERMIT ACTIVITY AND TRENDS

SUMMARY

- Since 1972, a total of 94 shoreline permits have been approved for Ruston Way, Schuster Parkway and City Waterway. Of these, 71 resulted in development and seven are still active. Thus, 16 permits were issued for developments which were never constructed.

- The 78 permits which have resulted in development, or which have not expired, involve 47 percent of the properties on the subject shoreline.

- Development activity is declining along the Ruston Way, Schuster Parkway, City Waterway shoreline segments. Shoreline permits have been issued since 1972. During the first eight years, 39 permits resulted in development. During the last eight years, 25 permits resulted in development (a 36 percent decrease). Currently, seven shoreline permits have not expired. If development does occur with these 7 permits, then the decline in development activity will change to 18%.

- Public agencies applied for and received 30 of the 78 permits. Approved uses include street improvements, sewers, storm drains, parks and public amenities. The majority of the permits for street improvements and utilities were issued for City Waterway. Such efforts reflect the policy of the Greater Central Business District Plan, which is to improve the water quality and appearance of the area. Ruston Way received the majority of permits for parks and public amenities. It is the City's intention, as expressed in the Ruston Way Plan, to develop the opportunities for public enjoyment.

- In City Waterway, 14 of the 35 permits issued were for water-dependent uses. Thirteen of the 14 water-dependent permits were for marinas or marina selected activities.

- The marinas in City Waterway are replacing heavy industrial water-dependent and water-related uses. Properties once used for lumber mills, log-rafting operations and ship-oriented warehousing are now used for marinas and marina-related activities.

- Permit trends on Ruston Way differ from those of City Waterway. Properties formerly used for marinas and boat-yards on Ruston Way are being converted to restaurants and parks.

- Public access has been a condition of 17 shoreline permits. Such efforts have been successful in creating large segments of a shoreside promenade along the perimeter of City Waterway and a continuous pedestrian/bike path along Ruston Way.

INTRODUCTION

The Washington State Shoreline Management Act requires that substantial developments proposed in marine waters, or within 200 feet of marine waters, receive shoreline permit approval from local government. It does note exceptions to this rule. Projects which are required to receive permit approval are reviewed for consistency with the policies of the Shoreline Management Act as well as local Shoreline Master Program regulations.

Local Shoreline Master Programs identify shoreline segments which are appropriate for specific uses. Certain categories of uses may be prohibited, while others are encouraged. In some cases, the local master program may be quite specific about the kinds of uses which would be allowed. In other instances, it may state preferences for broad categories of uses.

Approved permits reflect the preferences of the local master program. However, identifying the uses which tend to prevail over other possible uses provides insight into the dynamics of a particular shoreline. For example, if one or two uses are predominant and are shown to be replacing other uses, then statements can be made about the development trends in the area. Equally helpful in understanding a shoreline is to determine the total number of permits which have been issued and to identify uses which have been approved but never constructed.

What follows is a description of the shoreline permit activity along Ruston Way, Schuster Parkway and City Waterway. Development trends are identified by reviewing the number of approved permits, the predominant uses, and the types of projects which are approved. A brief discussion regarding public access as a condition for permit approval is included at the end of this section. Appendix E lists the shoreline permits which have been processed between 1972 and 1987 for the three shoreline segments.

FINDINGS

Permit Activity

Since 1972, the City of Tacoma processed 98 shoreline substantial development permits. Of these, four were denied; 16 expired with no development taking place; seven have not expired, but development has yet to take place; and, 71 have resulted in development.

Of the four permits which were denied, two were for sign waivers along Ruston Way. The other two were for developments proposed for City Waterway: one for covered moorage and the other for permission to repair a 63 foot boat on an upland location. The low number of denials can be attributed to the fact that City staff work closely with proponents prior to application. In this way, potential problems with a project are worked out in the early stages, and the proposal comes before the decision-makers with a reasonable likelihood of success.

The 16 expired permits were approved but never constructed. A shoreline permit expires if substantial progress toward completion of a permitted activity is not underway within two years of approval. Permit authorization terminates if the project is not completed within five years of approval. A one year extension can be granted to both the two year and five year time periods, provided there are reasonable factors delaying the project.

Twelve of the 16 expired permits were proposals for major new developments. Of these, two were for waterfront hotels, two were for mixed-use developments, and one was for a rowing club facility. Six of the expired permits proposed marinas with water-related uses. The remaining four were additions to existing structures.

To some extent, unfavorable market conditions appear to be the reason why the twelve permitted developments were never constructed. In the case of the two waterfront hotels the decision not to build was based on a determination that the hotel market was saturated at the time. Apparently, the marinas were not

built because of a perceived lack of demand or investor interest. This was not the case for the two mixed-use developments. One of these proposals was re-permitted and constructed as "The Dock". The other was shelved because the owner decided an adjacent concrete batch-plant would not make a suitable neighbor. There is some speculation that since the batch-plant has been closed, the proposal will be reactivated.

It should be noted that there are seven permits which have not expired, but development has yet to take place. Four of these involve the expansion of existing structures or uses. One is for a new restaurant on Ruston Way. Two propose major office/retail establishments including a remodel of the city-owned Municipal Dock and a large commercial venture on Schuster Parkway. The Municipal Dock permit will expire in June 1988. A study is currently underway to determine whether it is economical to preserve the existing structure of Municipal Dock. The proponents of the Schuster Parkway project appear to have abandoned this project. The property has since been sold to the federal government for use by the Washington National Guard, who intended to use the site for ship moorage and a training site. However, subsequent public opposition to this plan has delayed a decision, and at this time it is appears that the National Guard intends to sell the property.

Of the seven permits considered to be still active and the 71 permits which have already been constructed, 48 were issued to private interests and 30 were issued to public agencies, including the City of Tacoma, Department of Public Works and Department of Planning, the Metropolitan Park District, and the Washington Department of Fisheries.

The Tacoma Department of Public Works has received the majority of permits issued to a public agency. Sixteen permits were issued for street improvements, storm drain outfalls and sanitary sewers. Ten of these applied to City Waterway, four to Ruston Way and two to Schuster Parkway. In contrast, ten permits were granted to the Public Works Department for parks and public enjoyment amenities. Of these, one applied to City Waterway and nine to Ruston Way. The Public Works Department also obtained permits for

Fire Station #5, and an underwater rescue training facility (sunken cars to train divers in rescue techniques).

The two remaining permits obtained by public agencies were both for public amenities along Ruston Way. The Metropolitan Park District obtained the permit to develop Marine Park. The Washington Department of Fisheries received the permit to build an artificial reef off the end of the Marine Park fishing pier.

Of the 48 shoreline permits issued to private development interests, 24 went to City Waterway, 19 to Ruston Way and five to Schuster Parkway. Private developers along City Waterway received approval for the highest number of water-dependent uses. Fourteen water-dependent uses were granted permits for City Waterway. In contrast, Ruston Way and Schuster Parkway each received two. Marinas and marina expansions account for 13 of the 14 water-dependent uses authorized for City Waterway. The remaining water-dependent permit on City Waterway was issued for a mixed-use development which includes a harbor tour business.

Private developers along Ruston Way received the highest number of permits for restaurants and restaurant additions. The City of Tacoma granted 11 such permits to applicants along Ruston Way, compared to 3 in City Waterway. (Included in this City Waterway count is the proposed remodel of Municipal Dock which has a restaurant as one of its multiple uses).

One water-related permit involving piping to load barges, received approval along Ruston Way. In comparison, two water-related uses, the Continental Grain Company on Schuster Parkway and Johnny's Seafood along City Waterway each received two permits.

The City of Tacoma issued 11 permits to private developers for nonwater-dependent uses. Of these, five were on Ruston Way, three on City Waterway and one on Schuster Parkway. Four of the permits were granted to already existing nonwater-dependent uses: two for uses associated with ASARCO; one for a mixed-use office/retail business; one for a telephone line under the

11th Street Bridge; and, one for a parking lot associated with an upland restaurant along Ruston way.

Table 8 summarizes the permit information discussed above. Note that multiple uses have only one water-code. If a water-dependent use is part of a multiple use, the entire permit receives a water-dependent rating. If a multiple-use has a restaurant in addition to other nonwater-dependent uses, the entire permit is coded as a restaurant.

Of the 78 permits which are either unexpired or have resulted in development, the Public Works Department received 16 for street improvements, sewers and drains. Since these permits involve work within road right-of-way or easements, they are not associated with a specific property or address. The other 62 permits do apply to a specific property.

There are presently 79 waterfront properties along the subject shoreline with an assigned address. (For purposes of this study, adjacent parcels in public ownership are considered one property and given a single address). The 62 permits issued to specific properties applied to 30 of the 79 properties. Thus, 38% of the properties on the subject shoreline received shoreline permits which resulted in development or which may result in development if approved permits are not left to expire.

Roughly the same percentage holds true for the individual shoreline segments. On Ruston Way, 37% of the 43 waterfront properties received shoreline permits (which have not yet expired or which have resulted in development). On Schuster Parkway the figure is 38% of 8 subject properties and on City Waterway, 39%, of 28 properties.

Table 9 shows these relationships. It should be noted that several properties have received more than one permit. For this table, only the fact that a property was the subject of permit activity is considered.

Table 8. Shoreline Substantial Development Permits.

	RUSTON	SCHUSTER	CITY WATERWAY	TOTAL	PERCENT
WATER DEPENDENT	2	2	14	18	23
WATER RELATED*	1	2	2	5	16
WATER RELATED PARKS	12	0	1	13	17
WATER RELATED RESTAURANTS	11	0	3	14	18
NON-WATER DEPENDENT	5	1	3	9	12
PUBLIC WORKS ROADS AND UTILITIES	4	2	10	16	20
SIGN VARIANCES	1	0	2	3	4
SUBTOTAL	36	7	35	78	100%
PERMITS DENIED	2	0	2	4	
PERMITS EXPIRED	5	2	9	16	
TOTAL	43	9	46	98	

* Uses that are facilitated by a shoreline location.

Table 9. Number of properties receiving shoreline permits which have either resulted in development or which have not yet expired.

	Total Number Wft Properties	Number of Properties Receiving Permits	Percent (%)
Ruston Way	43	16	37
Schuster Prkwy	8	3	38
City Waterway	28	11	39
TOTAL	79	30*	

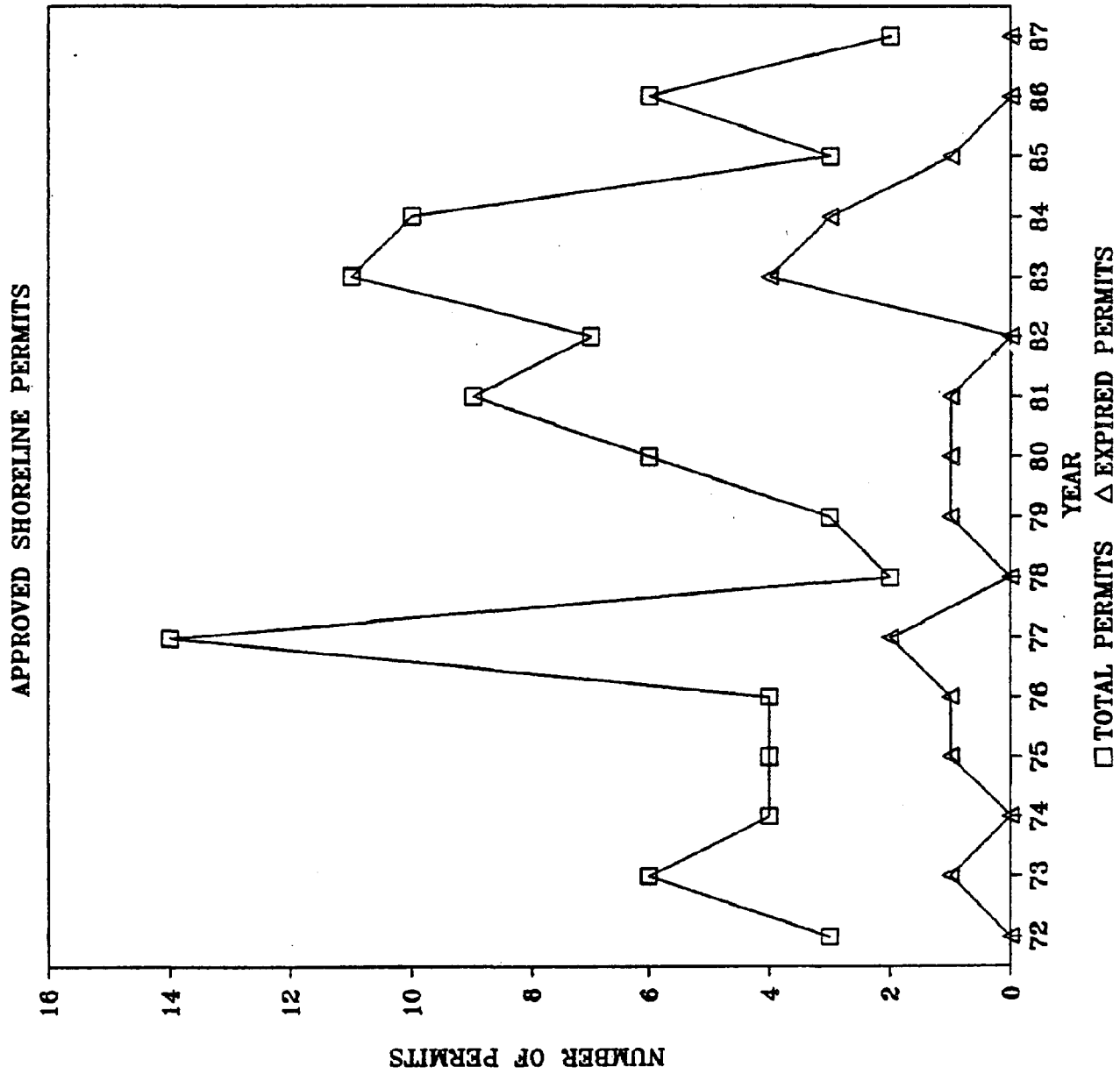
* Two properties receiving permits are not included because they do not have a waterfront location.

Permit Trends

Shoreline permits have been issued since 1972. A review of the permits resulting in construction over this 16 year period indicates that the introduction of new development is declining. During the first eight years, 39 of the approved permits resulted in development and 7 expired. During the next eight years, 25 permits resulted in development, and 10 expired (a 36 percent decline since 1980). However, there are seven unexpired permits approved in the last eight years, but development has yet to occur. If these permits do result in construction, then the development trend over the last half of the 16 year period will show only an 18% decline over the first half.

An examination of permit data shows that a single "bumper" year for permits in 1977 skews the development picture. Figure 21 plots the total number of permits approved in each year since 1972. The 14 permits approved in 1977 is far above the norm. In fact, if 1977 is removed from the analysis, an average of 4.5 permits received approval each year during the eight year period between 1972 and 1979. In comparison, an average of 6.6 permits were approved each year between 1980 and 1987.

Figure 21. Approved Shoreline Permits



Nevertheless, fewer approved permits expired during the first eight years. Figure 21 plots the number of expired permits against the total number of permits issued. Between 1972 and 1979, 18% of the permits expired before development could take place. Between 1980 and 1987, 25% of the permits expired. However, given the fact that seven unexpired permits have not been developed, the percentage of expired permits could possibly increase for this period. If this occurs, it would strengthen the downward trend in development.

A look at the distribution of permits which have resulted in development or which have not yet expired reveals certain patterns. Permits for water-dependent and nonwater-dependent uses are fairly evenly distributed over the 16 year period between 1972 and 1987. Permits for parks on the other hand, occurred sporadically. Four received approval in 1977, two in 1980 and another two in 1987. In contrast, restaurants received approval at an increasing rate. Before 1980, the City of Tacoma granted only three permits for eating and drinking establishments. Since then, there have been 11. The type of use receiving the fewest permits is the water-related category for uses which are facilitated by a shoreline location. Only five permits were issued for this type of use: three between 1972 and 1975, and two in 1981 (Table 8).

The permits issued for each shoreline segment show specific trends in use conversions.

Ruston Way

On Ruston Way, there is a decided trend toward restaurants and parks. Of the 36 permits issued to Ruston Way, 11 involved a conversion in use. Two were for restaurants on vacant land and two were for restaurants on land that had been used by a prior water-dependent development. Five of the permits issued for parks were conversions from vacant land and one from a recent water-dependent use. One property was converted from a vacant property to a nonwater-dependent use.

As discussed in Section III, conversions away from water-dependent uses are the last in a long series on Ruston Way. This area had been Tacoma's center of water-dependent and water-related activity. However, in the early 1900's, when the Puyallup river-delta became the focus of Port development, this situation began to change. One-by-one, the lumber mills, shipyards and marinas along Ruston Way have, shut their doors. Even two water-dependent/related uses which received shoreline permits, (ASARCO and Bayside Boat Lockers), are no longer in operation.

The Shoreline Master Program prohibits the development of new industrial uses along Ruston Way. Thus, the industrial water-dependent and water-related uses of the past cannot be reintroduced to this area. However, the Shoreline Master Program does encourage non-industrial, public and private water-dependent and water-related uses. For the most part, these have failed to occur on Ruston Way. Except for the fireboat station, some transient moorage docks and fishing piers, water-dependent uses have not located on Ruston Way.

Non-industrial water-related activities, which received approval, do not fall into the category of uses whose operation is facilitated by a shoreline location. Instead, the water-related uses which have been granted approval on Ruston Way are predominantly parks and restaurants. Parks and restaurants fall under the Tacoma Shoreline Master Program definition of water-related because they provide an increased opportunity for the public to enjoy the shoreline.

City Waterway

Compared to Ruston Way, City Waterway shows an entirely different pattern of use-conversion. Instead of parks and restaurants, City Waterway is experiencing a growing number of marinas. Of the 35 permits issued to this stretch of shoreline, seven involved a change in land use activity. Of these, six were conversions to marinas. Two industrial water-dependent uses and three industrial water-related uses were converted to marinas. Also a marina was added to a property with a nonwater-dependent use and one water-

related warehouse was converted to a multiple use with a water-dependent element (harbor tours).

There is a trend on City Waterway away from the traditional working waterfront. A policy in the Tacoma Central Business District Plan encourages the relocation of nonwater-dependent and non-water related industrial uses. However, the permit history also shows a reduction in the number of industrial, water-dependent and water-related uses. Marinas have replaced the logging operations, the rafting companies, and the warehouses which were staging platforms for the loading and off-loading of ships. The marinas which are classified, non-industrial, water-dependent, are typically associated with water-related uses serving recreational boaters and the public. This conversion has changed the character of City Waterway and given it a different role to play in the downtown area.

On City Waterway, there does not appear to be a trend toward multiple use developments composed primarily of nonwater-dependent uses. Only one permit, which resulted in such a conversion, actually fits this category. Others have been approved but the permits have expired. One multiple use development has not been constructed but the permit has yet to expire.

Schuster Parkway

Schuster Parkway has had only two use conversions. One permit approved a water-related use on a vacant property. The other approved a nonwater-dependent use on a property recently vacated by an industrial, water-dependent use (shipyard).

Public Access Requirements

The Tacoma Shoreline Master Program requires that commercial development proposals provide public access. The regulations strive to improve the public's opportunity to enjoy the City's waterfront through viewpoints, bike paths, walkways, parks, beach areas, piers and transient moorage.

There are also public access requirements for specific shoreline segments. The Shoreline Master Program states that commercial developments along Ruston Way must tie into the existing bicycle/pedestrian path and provide reasonable access to the shoreline. A policy in the Greater Central Business District Plan calls for a continuous pedestrian promenade around the perimeter of City Waterway. The intent is to develop this pedestrian corridor in conjunction with private redevelopment. Both the Ruston Way and City Waterway pedestrian corridors are segments in an overall pedestrian circulation system which is being further refined as part of the draft Shorelines Trails Study. Realization of this shoreline trail system depends, in part, upon the public access provisions of shoreline permits.

Public access has been required as a condition of 17 shoreline permits. Eight of the permits were issued to commercial development proposals along Ruston Way, eight along City Waterway, and one on Schuster Parkway. A review of these permits shows that public access requirements have been successful in providing a continuous pedestrian/bike path along Ruston Way and large segments of a promenade around City Waterway (Figures 22 and 23). Shoreline properties which have not been the subject of permits do not provide public walkways along the water. Where this occurs, the promenade cuts back to the sidewalk which then serves as a link to the next stretch of promenade.

Given the overlay plan for a promenade along Ruston Way and City Waterway, developers do not have to guess at what public access would be appropriate. In most instances, shoreside walkways were provided and many proposals included additional public access elements, including piers, public viewing platforms, and attractive landscaping.

Difficulties in implementing the public access requirements have been two-fold:

1. Determining how to make the public access inviting and usable when it is part of an active commercial development, and

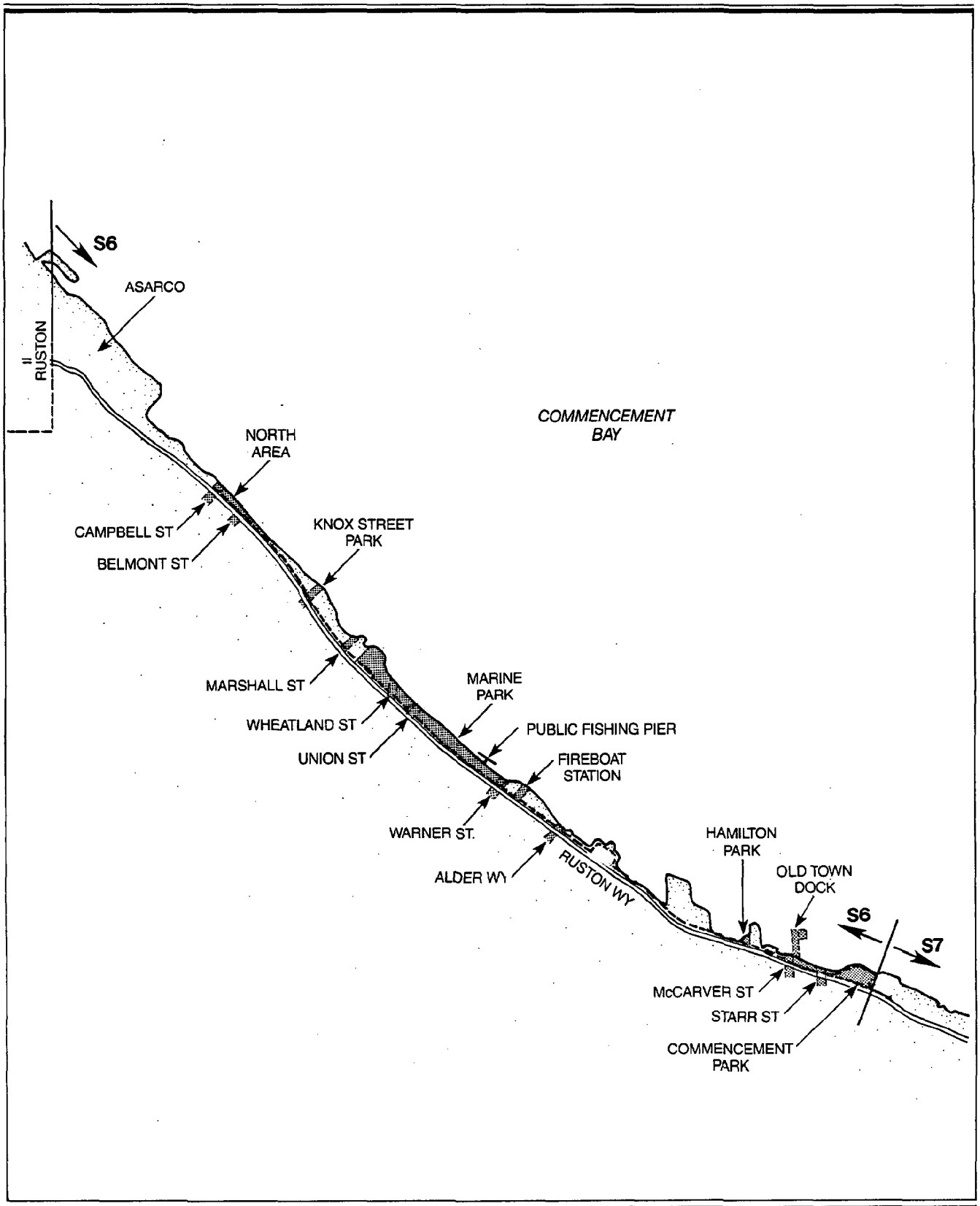


Figure 22.
Public Ownership Areas for Ruston Way

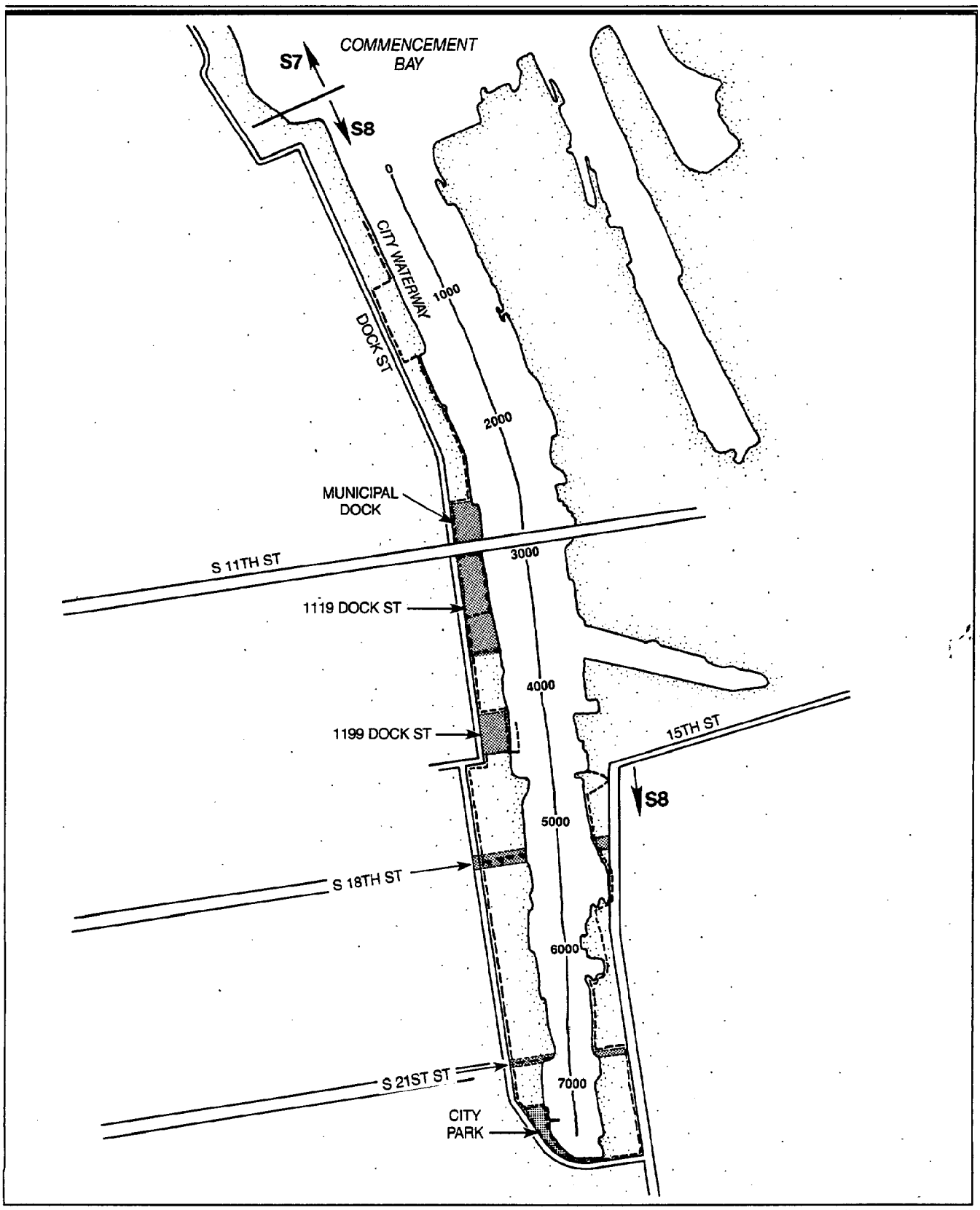


Figure 23.
Public Ownership Areas for City Waterway

2. Determining the kind and scale of public access when more than a walkway is required.

The first of these has been dealt with by requiring landscaping and buffers. However, in one instance this was not possible and there is still some question as to the "quality" of the public access provided. With respect to the second difficulty, developers and decision-makers have had little to guide them. As a result, each instance has to be negotiated anew.

It is important that developers and decision-makers have predictable guidelines for public access. Performance standards could be developed to ensure inviting and usable public amenities. Specific regulations could be designed to address those situations where public access is required in addition to a walkway. Such regulations could specify a range of appropriate public access elements at a scale commensurate with the size and type of proposed development.

CONCLUSIONS

Shoreline permit activity shows a preference for specific uses. Along Ruston Way, parks and restaurants represent the majority of new projects. On City Waterway, the preference is decidedly in favor of marinas.

The parks and restaurants of Ruston Way are locating on properties once used by industrial water-dependent and water-related uses. Marinas, boat-yards and moorage docks are no longer a feature of this segment of the shoreline. In contrast, 16 shoreline permits have been approved for marinas in City Waterway. Of these, three expired and two have not been constructed. There is some speculation that the market is saturated, and the two proposed marina projects may not be constructed.

Marinas on City Waterway have replaced uses which can be described as industrial or heavy commercial, water-dependent and water-related. Recreational boating activity occurs where lumber mills, log-rafting operations and warehousing once dominated.

To a large extent, these shoreline land use changes can be attributed to adopted plans and policies. On Ruston Way, the Shoreline Master Program and The Ruston Way Plan envision mixed public and private, commercial water-dependent and water-related uses. Industrial and residential uses are prohibited. The parks and restaurants, now characteristic of the Ruston Way shoreline, are considered water-related because they allow the public an opportunity to enjoy the shoreline.

The Shoreline Master Program also envisions mixed public and private development on City Waterway. Marinas and water-related commercial uses are encouraged, as well as residential uses. Industrial uses are not listed as activities which should occur on this shoreline segment. In addition, the Greater Central Business District Plan states as a policy that efforts should be made to eliminate the substandard conditions of the area and industrial, nonwater-dependent and non-water related uses should be encouraged to relocate to more suitable areas. The permit history for City Waterway shows a trend away from industrial uses.

While much has happened according to plan and policy, there is very little variety in the types of projects being developed. In fact, projects which can be said to deviate from the norm, have been approved but never developed. In this category falls two waterfront hotels, a large office/retail complex, and a water-oriented/commercial establishment. Only one multi-use commercial/retail development has been constructed. These developments are not prohibited by regulation, yet they have failed to occur.

Other sections of this study examine factors influencing development in the area. Section V entitled Suitability Analysis and "Development Constraints" and Section VI entitled "Existing Economic Conditions and Future Economic Trends" address the development picture from different perspectives.

Section V:
Suitability Analysis and Development Constraints

SECTION V
SUITABILITY ANALYSIS
AND
DEVELOPMENT CONSTRAINTS
RUSTON WAY - SCHUSTER PARKWAY - CITY WATERWAY

SUMMARY

o The Shoreline Management Act and the Tacoma Shoreline Management Master Program (Master Program) state that water-dependent and water-related uses should be given priority status with regard to development of the shorelines. In large part, the regulations accomplish this by designating water-dependent and water-related activities as permitted uses in urban areas (where environmentally acceptable) allowing landfilling and over-the-water construction. In contrast, nonwater-dependent uses are confined to the uplands (unless no other reasonable use can be made of the property). Federal regulations provide the same priority status for water-dependent and water-related uses but allow nonwater-dependent uses on over-the-water construction if no landfill is involved and the impacts to navigation and the environment are not significant.

  Not all urban shorelines are suited to water-dependent and water-related development. The first part of this section examines the Ruston Way, Schuster Parkway, City Waterway shoreline to determine if the characteristics of the waterfront are suitable for a number of specific water-dependent and water-related uses. The uses considered are: cargo terminals, tug and barge terminals, major shipbuilding, commercial boat building, water-related manufacturing, seafood processing, recreational boating, and cruise ship terminals.

o The second half of this section discusses physical and legal constraints which exist in the three shoreline areas and which affect all development. In this category fall environmental issues, land ownership disputes, parking limitations and a lack of public transit. Together

with the suitability analysis, the analysis of development constraints provides a background for land use development in the area.

SUITABILITY ANALYSIS

- The suitability analysis was prepared using a table of generalized site requirements for a number of water-dependent and water-related uses, including: cargo terminals, tug and barge terminals, major shipbuilding, commercial boat building and repair services, fish processing, water-related manufacturing, recreational boating and cruise ships. This table identifies the amount of land required for such uses; determines whether or not the use is compatible with residential activities; lists water depth requirements for vessels servicing the development; and states the importance of extreme wave conditions.

Ruston Way

- Many shoreline characteristics of Ruston Way make the waterfront less than suitable for a number of the water-dependent and water-related uses being considered. The limitations include: a scarcity of dry land area; the existence of adjacent incompatible land uses; the fact the railroad only services the ASARCO property at the north end of Ruston Way; and, exposure to extreme wave conditions.

- In terms of the water-dependent and water-related uses being considered, the exposed shoreline along Ruston Way makes it an unsuitable location for tug and barge terminals, commercial boat building, recreational boating and to some extent fish processing operations.

- The proximity of residential neighborhoods and the existence of public recreational uses pose compatibility problems with such uses as cargo terminals, major shipbuilding, water-related manufacturing and seafood processing operations. If the compatibility issues could be resolved, the scarcity of dry land area would still make most of the Ruston Way shoreline unsuitable for most of the uses listed above. Only the ASARCO

property has sufficient land to support these uses, although two parcels on Ruston Way have marginally enough land and landfilling is always a possibility.

- Rail access poses another impediment to some of the water-dependent and water-related uses being considered in this analysis. Only the ASARCO property receives direct rail access and it would be fairly difficult for waterfront developments on the rest of Ruston Way to utilize rail services. The reason is that Ruston Way separates the shoreline from the railroad and there is little available land to accommodate rail access to the waterfront. This constraint limits the suitability of the Ruston Way shoreline (except for ASARCO) for such uses as cargo terminals, major shipbuilding, and water-related manufacturing.

- Conclusion: Ruston Way is not suitable for a number of water-dependent and water-related uses which are incompatible with residential and public recreational uses and which require protected moorage, a good amount of dry land area, or rail access. Of all the uses considered, a cruise ship terminal was the only activity determined to be compatible with adjacent uses while at the same time not requiring protected moorage, a great deal of dry land area, or rail access. If the compatibility conflicts could be resolved, the ASARCO property would be suitable for a number of the water-dependent and water-related uses being considered, including: cargo terminals, major shipbuilding, water-related manufacturing and fish processing. The primary attributes of the ASARCO property are sufficient land area and rail access.

Schuster Parkway

- Schuster Parkway has many of the same limitations as Ruston Way for the uses being considered. However, there is rail access along the entire length of the shoreline and there is more land area available. If compatibility issues could be resolved with upland residential neighborhoods, some of the industrial uses being considered would be appropriate. These would include, major shipbuilding, water-related

manufacturing and fish processing. The deep water offshore is an important attribute of this shoreline. It appears only the property currently utilized by the Continental Grain Co. is large enough to support a small cargo terminal.

- As with Ruston Way, the one use which could be immediately suitable on the Schuster Parkway shoreline would be a cruise ship terminal. It is generally thought that such uses can be compatible with residential neighborhoods and Schuster Parkway is fairly close to nearby tourist facilities.

City Waterway

- City Waterway does not have some of the attributes which make Ruston Way and Schuster Parkway unsuitable for a number of water-dependent and water-related uses. For example, there are no adjacent residential neighborhoods in the vicinity, there is protected moorage, and there are properties with sufficient dry land area to support many of the uses being considered. The exception would be cargo terminals which require a minimum of eight acres of land. One major drawback of City Waterway, however, is the lack of deep water, particularly south of the 11th Street Bridge. The shallow water limits the suitability of this area to recreational boating and possibly fish processing. The north half would be suitable for some of the other uses being considered, including: tug and barge terminals, commercial boat building, and cruise ship terminals.

- Lack of rail access to all but the extreme northwest end of the waterway make the area unsuitable for uses which depend on goods delivered by rail. In this category fall water-related manufacturing, cargo terminals and major shipbuilding. Cargo terminals are also limited by the lack of available land.

- Conclusion: City Waterway is suitable for recreational boating and fish processing throughout its length. North of the 11th Street Bridge,

where water depths of -30 feet MLLW are available, is also a suitable shoreline for cruise ship terminals, tug and barge terminals, commercial boat building and water-related manufacturing (if rail access is not required). There is probably not enough land area for a cargo terminal.

DEVELOPMENT CONSTRAINTS

- The sediments in the nearshore area off the ASARCO property and in City Waterway are the subject of current Superfund clean-up efforts. In addition, because of past industrial practices, upland properties in both areas are subject for concern. Until clean-up efforts are successfully completed, shoreline development which proposes to disturb the sediments, will be severely constrained.

- The severity and extent of upland contamination is being addressed at the ASARCO site but little data has been collected on the condition of soils adjacent to City Waterway. One problem surfaced during the construction of SR-705, when excavations near the south end of City Waterway, uncovered polluted soils from a former gasification plant. The site was stabilized at considerable expense. A similar situation exists to the southeast of City Waterway where identified tar pits are believed to be contaminating groundwater. Both incidents have been highly publicized and have given landowners and investors alike a reason to be apprehensive about the City Waterway area. It is well known that clean-up costs, difficulties in identifying the responsible party and time delays can be financially debilitating.

- The east side of City Waterway is currently the subject of a land claim by the Puyallup Indian Tribe. Negotiations are in progress. Until this issue is resolved, the titles to the properties in question are clouded and prospective developers may be unable to obtain financing or unwilling to risk construction.

- Parking is a problem on the Ruston Way shoreline because of the limited amount of land available. Currently regulations do not allow over-the-

water construction or landfilling for nonwater-dependent uses. The federal regulations with regard to landfilling are equally as strict. Therefore, if a proposed use is nonwater-dependent it must locate on the limited amount of dry land available. In such cases, there is usually not enough dry land area left for associated parking.

Even for water-dependent and water-related uses, parking requirements can prove to be a constraint. The cost of over-the-water parking facilities cannot always be offset by the revenue generated by the use. Landfill is a less expensive alternative, but it raises environmental concerns. When landfill can be approved for water-dependent and water-related uses, permit approval is usually conditioned upon the implementation of an on-site or off-site intertidal mitigation program, which can also be quite costly.

- Solutions to the parking problem on Ruston Way consist of maximizing what little land area there is by allowing businesses to lease right-of-way from the City or encouraging BNR to lease railroad right-of-way. The possibility of increasing the width of Ruston Way to allow for on-street parking is not considered reasonable. A centralized parking garage, situated near an activity node along Ruston Way is an expensive but possible solution. Depending on the design, this solution could involve over the railroad construction.

- Parking is not a problem on Schuster Parkway because none of the existing uses attract the public or generate much employee traffic. Nor is there a serious parking problem along City Waterway. In both cases, however, future uses may create parking demands which cannot be accommodated by available land. On City Waterway, there are adjacent lands which could be converted for parking, but the narrowness of the Schuster Parkway segment precludes convenient off-site parking.

- Retail and commercial businesses on City Waterway are constrained by the physical barriers which separate the shoreline from downtown Tacoma. In spite of the proximity of the waterfront to the heart of Tacoma's

commercial district, there is only one direct pedestrian access under the 11th Street Bridge. Increasing the public's opportunity to enjoy the waterfront, by providing pedestrian access points, would stimulate retail and commercial development. It could also reduce parking pressure on the shoreline as people would be able to park in available areas in downtown Tacoma.

- Pedestrian access from the upland residential neighborhoods to the Schuster Parkway and Ruston Way shorelines is provided through a series of trails. The trail system seems adequate, although there is some vandalism and the paths require maintenance. Visitors to Ruston Way do not park in upland areas and then walk to the shoreline. Therefore, improving the trails would not remove parking pressure on Ruston Way.

- A lack of public transit to the area is not a major development constraint. If regular bus service were provided it could increase the number of people who visit the area and frequent waterfront businesses. Pierce Transit is experimenting with a summer, week-end shuttle, and a Wednesday lunch-hour run. If more commercial and retail establishments begin to locate in the area there could be enough demand to support a regular system of public transit.

INTRODUCTION

The Shoreline Management Act directs local government to give priority to industrial and commercial uses which are particularly dependent on a shoreline location (RCW 90.58.020). The City of Tacoma Master Program for Shoreline Development (Master Program) incorporates this policy as part of the definition for urban environments:

> Because shorelines suitable for urban uses are a limited resource, emphasis should be given to development within already developed areas and particularly to water-dependent and industrial and commercial uses requiring frontage on navigable waters.

In reality, not all urban waterfronts are suitable for water-dependent or water-related uses. Shoreline planning should recognize areas that may be limited in this respect and identify realistic land use potentials. In some cases development constraints for nonwater-dependent uses exist as well. These too must be factored into shoreline planning decisions.

What follows is a suitability analysis of the Ruston Way, Schuster Parkway and City Waterway shoreline segments. The analysis examines waterfront characteristics to determine whether or not the shoreline is suitable for some major categories of water-dependent and water-related uses. The latter part of the section discusses other development constraints which exist along the subject shoreline, including environmental concerns, land ownership disputes, pedestrian access limitations, and the lack of public transportation.

SUITABILITY ANALYSIS

Water-dependent and water-related uses have differing operational characteristics which determine where they can locate on the shoreline. Such locational requirements are often a matter of the size and number of boats or ships used, and the amount of dry land needed.

In general, industries which use larger ships need larger sites, deeper water and less wave protection. Businesses that either manufacture goods,(water-related manufacturing) or store goods (cargo terminals), need large amounts of dry land in comparison to businesses that primarily provide moorage (e.g. recreational marinas and tour boat facilities) which require dry land primarily for parking. In between, are uses such as shipyards, that need both dry land for initial construction processes and submerged land for moorage of ships nearing completion or undergoing minor repairs.

Although differing sizes or adaptability to different conditions can vary individual site requirements, generalizations can be made regarding the suitability of shorelines for specific categories of use. The Technical Advisory Committee involved in the recent amendments to the Seattle Shoreline Master Program, developed a table of generalized site requirements for different types of water-dependent and water-related uses. Included on this table are the site requirements for cargo terminals, tug and barge terminals, major shipbuilding, commercial boat building and repair services, fish processing, water-related manufacturing, recreational boating and cruise ships (Table 10). This table can be used as a basis to assess the suitability of the Ruston Way, Schuster Parkway and City Waterway shoreline segments for water-dependent and water-related uses.

Table 11 identifies the shoreline characteristics of the Ruston Way, Schuster Parkway, City Waterway shoreline segments in terms of the parameters listed in Table 10. Each shoreline is described in the following manner: how deep the water is at the end of existing piers; the channel depth (if applicable); the amount of land available and the portion that is dry land; whether autos, trucks or rail can access the shoreline; whether there are nearby residential neighborhoods; and, whether tourist facilities are available in the vicinity.

Table 12 combines Tables 10 and 11. The shoreline characteristics of Ruston Way, Schuster Parkway and City Waterway are compared to the locational requirements of specific water-dependent and water-related uses and a determination is made as to whether the shoreline segment is suitable or

Table 10. Generalized locational requirements for water-dependent and water-related uses.

	Cargo Terminals	Tub & Barge Terminals	Major Ship-building	Commercial Boatbuilding & Repair/ Services	Fish Processing	Water-Related Manufacturing	Recreational Boating & Services	Cruise Ships
Pier Depth	25'-55'	25'	50'	20'	20'-50'	20'-30'	10'	25'-35'
Amount of Land/Site	8-100 acres	1 acre min.	6 acres	1.5 acres	0.25-12 acres	2-10 acres	0.5 acres	0.25-1 acre
Wave Protection	Not Required	Required	Not Required	Required	Some Required	Not Required	Required	Not Required
Access	Truck/rail	Truck	Truck/rail	Truck	Truck	Truck/rail	Auto	Truck/Auto Bus
Land Characteristics	large amount of dryland	both dry & submerged	both dry & submerged	both dry & submerged	both dry & submerged	large amount of dryland	large amount of submerged	mostly submerged
Compatible with Residences	No	No	No	No	No	No	Yes	Possibly
Benefits from nearness to tourist/ commercial facilities	No	No	No	No	No	No	Yes	Yes

Source: DCLU, 1984. An assessment of the future needs of water-dependent uses in Seattle. p. VII-3.

Table 11. Characteristics of Tacoma shoreline: Ruston Way - Schuster Parkway and City Waterway

	Ruston Way	Schuster Parkway	City Waterway
Pier Depth (Typical)	15'-33'	30-60'+	15-30'
Channel Depth	N/A	N/A	6-30' MLLW
Amount of Land Along Shoreline	85 acres	55 acres	55 acres
Amount of Dry Land	44 acres	47 acres	43 acres
Amount of Submerged Land	41 acres	8 acres	11 acres
Residences in Area	Yes	Yes	No
Nearness to Tourist Facilities	Fair	Fair	Excellent

Table 12. Suitability of Tacoma's Shoreline Segments Ruston Way, Schuster Parkway and City Waterway for specific Water-Dependent and Water-Related Uses.

	Ruston Way	Schuster Parkway	City Waterway
Cargo Terminals	U*	U**	U
Tug and Barge Terminals	U	U	S
Major Shipbuilding	U*	U**	U
Commercial Boat Building	U	U	S
Water-Related Manufacturing	U*	U**	S-
Seafood Processing	U**	U**	S
Recreational Boating/Services	U	U	S+
Cruise Ships	S-	S	S+

S+ = Highly Suitable
S = Suitable
S- = Suitable with Limitations
U = Unsuitable

* Would be suitable at the ASARCO property, if compatibility issues were resolved.

** Would be suitable on the few parcels which have enough land area, if the compatibility issues with adjacent residential neighborhoods and recreational uses were resolved.

unsuitable for that specific use. Appendix F provides additional detail on the rationale used to make the suitability determinations.

What follows is a discussion of the suitability of the Ruston Way, Schuster Parkway and City Waterway shorelines for the major categories of water-dependent and water-related uses.

Ruston Way

The shoreline characteristics of Ruston Way are not well suited to most of the water-dependent and water-related uses under consideration. Limitations include: the exposed shoreline; the scarcity of dry land area; the fact that the railroad can only service the waterfront at ASARCO on the north end of Ruston Way; the proximity of residential neighborhoods; and, the predominance of public recreational activities.

The southeast shoreline of Commencement Bay is exposed to direct wave attack from the north and northwest. Significant wave heights of 5 feet (1.5 m), have been computed for this shoreline, although 98 percent of the time wave height is estimated at less than 1 foot (U.S. Army Corps of Engineers 1981). Some of the conventional water-dependent and water-related activities, which require protected moorage, include tug boat and barge terminals, marinas, commercial boat building operations and to some extent fish processing facilities. Therefore, Ruston Way is not considered a suitable shoreline for these activities.

Another factor which affects development along Ruston Way, is the limited amount of dry land. However, it should be noted that the Master Program does allow landfill and construction on piling for water-dependent and water-related uses (when environmental impacts are not significant). Therefore, it is possible that additional area could be created for these uses on Ruston Way. Presently, only a few parcels have enough dry land to support most of the water-dependent or water-related uses listed in Table 1. The exceptions include; the ASARCO property at the north end of Ruston Way, which has almost 34 acres of land within the shoreline segment (32 acres of which is dry); the

Dickman Mill site; and, the C.I. Shenanigan property. (Note: In this analysis park lands are not considered available for development).

The three properties listed above have enough land area to support some smaller scale operations, including tug and barge terminals, major shipbuilding, fish processing plants, water-related manufacturing and cruise ship terminals. Only the ASARCO property has enough dry land area to support a major cargo terminal.

Of the three properties mentioned above, only the ASARCO property is actually serviced by rail. Burlington Northern runs a spur line off its main track directly to the ASARCO site. The rest of the waterfront is separated from the railroad track by Ruston Way. Water-dependent uses which tend to rely on rail, are cargo terminals, major shipbuilding and water-related manufacturing. Therefore, if rail access is required, only ASARCO is suitable for these uses.

Another factor which limits the suitability of many of the water-dependent and water-related uses being considered, is the proximity of residential neighborhoods and public recreational uses. In general, only recreational boating and possibly cruise ship moorage are considered compatible with residential neighborhoods. Since Ruston Way is adjacent to residential areas, cargo terminals, tug and barge terminals, major shipbuilding, commercial shipbuilding, fish processing and water-related manufacturing would not be suitable.

From the above analysis it is possible to conclude that Ruston Way is really not a suitable location for most of the uses being considered. Under the compatibility issue alone only recreational boating and possibly cruise ships would be acceptable. However, the shoreline is too exposed for recreational boating and, without additional landfill or piling construction, there are only three sites which may have enough land area for cruise ships. These three sites are the Dickman Mill, C.I. Shenanigan, and ASARCO properties. Table 3 reflects the conclusion that the Ruston Way shoreline is unsuitable

for all except cruise ship lines and that even this use is severely restricted because there are few properties with sufficient land area.

If the compatibility issue could be resolved through mitigation and permit conditions, the Ruston Way shoreline would still not be a suitable location for most of the uses being considered. The exposed shoreline makes tug and barge terminals as well as commercial shipbuilding, unsuitable uses. In addition, a lack of rail access makes only the ASARCO site suitable for cargo terminals, major shipbuilding and water-related manufacturing. Fish processing remains a use which would be suitable on Ruston Way (if the compatibility issue could be resolved). As discussed above, without additional landfilling, there are presently only three sites that would have enough land area to support a fish processing operation.

To conclude, outside of the ASARCO property, there are only two sites on Ruston Way with enough land area for cruise ship activity. Additional sites could be made suitable with landfill or piling construction. If the compatibility issue could be resolved, these same two sites would be suitable for fish processing. In addition to cruise ship and fish processing operations, the ASARCO site, with its large amount of dry land area and rail access, would be suitable for cargo terminals, major shipbuilding and water-related manufacturing, provided the activity could be made compatible with adjacent residential uses.

Schuster Parkway

The Schuster Parkway shoreline has many of the same limitations as Ruston Way. The exposed shoreline and the adjacency of residential neighborhoods make this segment of waterfront unsuitable for a number of water-dependent and water-related uses. Uses which rely on protected moorage include tug boat and barge terminals, commercial boat-building, recreational boating and to some extent fish processing. However, many of the uses which do not rely on protected moorage are generally not considered compatible with residential development. Uses which fall in this category are major ship-building, water-related manufacturing, and cargo terminals. The only use which could

withstand exposed conditions and yet be compatible with residential development are cruise ship terminals.

If the compatibility issues could be resolved through mitigation, there are some fairly large sites along the Schuster Parkway shoreline which could support small to medium sized operations, including: major shipbuilding; water-related manufacturing; and, fish processing. However, only the site now occupied by the Continental Grain Co. has enough acreage to support a small cargo terminal. The uses mentioned above require deep draft moorage, an attribute of the Schuster Parkway waterfront. Since there are few shorelines in Tacoma with deep water immediately offshore, there has been and probably will continue to be a demand by such industries to locate on Schuster Parkway. In such a case, only uses which could prove compatible with adjacent residential uses, would be suitable.

On Schuster Parkway, rail access is not a limitation as it is for most of the Ruston Way segment. The railroad tracks run along the seaward side of Schuster Parkway, bordering the southwest boundary of the waterfront properties. Although there is little room for trains to manuever, waterfront development would still be able to access the rails.

From the above discussion, it is possible to conclude that the only immediately suitable use (of those being considered), is the cruise ship terminal. It is a use which could be compatible with adjacent residential uses and would also benefit from the proximity of downtown Tacoma and nearby tourist amenities. However, many heavy commercial/industrial water-dependent and water-related uses would also be suitable if the compatibility issues with adjacent residential uses were resolved.

City Waterway

Unlike Ruston Way and Schuster Parkway, City Waterway is a narrow protected inlet. Therefore, the uses requiring protected moorage are generally suitable. Tug boat and barge terminals, commercial boat building, recreational boating and fish processing are uses which fall into this category.

In addition, compatibility issues are not a problem on City Waterway. Adjacent land uses include transportation corridors, warehouses and manufacturing enterprises. There also is sufficient land area along the waterway to support water-related manufacturing and cruise ships. The only use that would be constrained by limited land area, would be a cargo terminal.

Limitations to water-dependent development on City Waterway include, shallow water depths and limited rail access. In terms of water depths, only the north-half of City Waterway is deep enough (-30 feet MLLW) to support tug and barge terminals, cruise ships and possibly fish processing. Except at the extreme north end of City Waterway where water is considerably deeper, major shipbuilding probably could not occur. With regard to rail service, Dock Street separates the tracks from waterfront properties, and there is no direct rail service on the South D Street side of the waterway, (south of S. 15th Street). Therefore, this shoreline would not be suitable for uses which depend on rail, including: cargo terminals; water-related manufacturing; and, major shipbuilding. (A possible exception would be the property on the extreme northwest end of the waterway where the tracks pass under the arterial and access the shoreline).

To conclude, City Waterway is suitable for uses which require protected moorage, and which do not require deep draft or rail access. Of the uses being considered, this includes tug and barge terminals, commercial boat building and repair, fish processing, recreational boating services and cruise ship terminals. Only the north half of City Waterway would have water depths sufficient for tug and barge terminals, cruise ships, and fish processing. Water depths are sufficient for major ship building at the extreme northwest end.

DEVELOPMENT CONSTRAINTS

The suitability analysis looks for shoreline characteristics which would meet the locational requirements of specific water-dependent and water-related uses. The lack of a locational requirement is considered to be a development

constraint. There are additional development constraints on the Ruston Way, Schuster Parkway, City Waterway segments which apply to all uses, including those that are nonwater-dependent. In this category fall environmental concerns, land ownership disputes, parking problems, pedestrian access limitations, and a lack of public transit.

Environmental Concerns

As discussed previously in Section III, the southwest shore of Commencement Bay was the scene of Tacoma's earliest industrial development. Over the years waste disposal and discharge practices resulted in several contaminated sites, both in the nearshore and upland areas.

Commencement Bay made the nationwide, top-ten, "interim priority list" of 115 top-priority hazardous waste sites targeted under Superfund (Comprehensive Environmental Response, Compensation and Liability Act). It is the top priority site in the State of Washington. As a first step toward addressing the problem, the Commencement Bay Nearshore/Tideflats Remedial Investigation study was prepared. This report identifies nearshore sediment contamination on Ruston Way and the waterways in the vicinity, including City Waterway. The following information was extracted from the study:

Ruston Way

The highest levels of metals contamination in Commencement Bay was found directly off the three outfalls of the ASARCO smelter. The defined problem area was also polluted with a number of organic compounds, including PAH and PCBs. The nearshore area off the ASARCO property is considered to be the highest priority area in Commencement Bay, and portions of it fall within the Ruston Way segment. The dry land portion of the ASARCO property, which extends further into Commencement Bay than the adjacent Ruston Way shoreline, was the result of past fill activity. Slag from the smelter was used for landfill material and this area is currently being sampled and monitored for contaminating substances. Feasibility studies are being prepared to determine ways of dealing with

the problem. In the meantime redevelopment in the defined problem area must await a resolution of the environmental issues.

City Waterway

The Commencement Bay Nearshore/Tideflats Remedial Investigation also identifies contamination problems in the sediments of City Waterway. Two high-priority problem areas were defined: one at the head of the main channel and another within the Wheeler-Osgood branch. It has been suggested that two major dock fires in the 1970's might be responsible for elevated levels of certain pollutants in the mouth of City Waterway. The sources of contaminants in the Wheeler-Osgood inlet have been traced to past and present industrial practices, including a meat-packing operation, a shipyard and possibly the migration of contaminated, shallow groundwater from a nearby area with identified tar pits.

Elevated levels of metals, particularly copper, zinc and lead were detected in sediment samples, decreasing in concentration from the head to the mouth of City Waterway. It is believed that two large drains carrying urban runoff from the Nalley Valley and South Tacoma are largely responsible for this build-up. Additional contaminants were detected in various concentrations, in samples taken at other sites in City Waterway. It was not possible to attribute these to a specific industrial source, although it is believed some of the likely contributors include the D Street Petroleum Tank Farm, Woodworth & Co., the Fick Foundry and the American Plating Company (now closed by the Tacoma-Pierce County Health Department). In addition, it is likely that a number of pollutants were introduced via the 28 storm drains that discharge into the waterway at various points along its entire length. Historically this discharge included raw sewage.

The Tacoma-Pierce County Health Department and the Washington Department of Ecology are working to identify and reduce present pollutant loadings to City Waterway. By sampling water discharging through storm drains and tracing contaminants back to the source, they have been able to identify polluters

and work with them to solve the problem. In some cases this means alternative disposal methods. In other cases, waste water discharge is directed to the Central Sewage Treatment plant.

To some extent it is believed that the major pollutant loadings to City Waterway are largely historical. Ongoing monitoring and enforcement action continues to abate point sources of contamination. However, storm water carrying runoff from urban streets, the accidental release of petroleum products from boats in the marinas and the slow movement of groundwater passing though contaminated upland sites and seeping into City Waterway are more difficult sources to control. At this time, the water quality of City Waterway (south and east of South 11th Street) is rated in the lowest possible category: Class C or Fair. It is the only Class C water in the State of Washington.[WAC 173-201-085 (5)]

Water quality problems tend to persist longer in City Waterway than other waterways in the tideflat area because it is believed that the Puyallup River generates a back eddy in this part of Commencement Bay. The effect creates weaker currents, reduced flushing, and higher salinity in City Waterway (US Army Corps of Engineers 1981). Consequently, pollutant loadings can have a greater residence time and potentially greater detrimental impacts.

While water quality effects biological organisms, it is not necessarily a deterrent to development. It is the settling and historical build-up of contaminants in the sediments that pose the constraint. Before the sediments can be disturbed, clean-up measures must be implemented. At this time, the City of Tacoma and the State of Washington are awaiting the results of a feasibility study which will identify possible remedies. Until clean-up measures are agreed upon and implemented, permits for developments which involve sediment disturbance (e.g. dredging, or over-the-water construction) will be difficult, if not impossible, to obtain. Even if permits were approved, it would be highly unlikely that developers would risk construction before remedial action takes place. Structures in or over-the-water, could pose a hinderance to clean-up operations.

Submerged lands are not the only contaminated areas in City Waterway. As mentioned above, there are upland sites, such as the tar pits near the Wheeler-Osgood inlet, which may contribute contaminants through groundwater seepage. It is probable that contaminated soils at the old coal gasification site (adjacent to A Street, between South 21st and 23rd) also leached pollutants into City Waterway, via groundwater. This problem was recently remedied in the course of constructing SR-705. During excavations for this project, significantly contaminated soils and groundwater were found in the vicinity of the gasification plant. Some of the material was considered extremely hazardous and was removed to a dangerous waste site. The remaining, less contaminated material, was isolated in a concrete vault and a 30-year groundwater sampling and monitoring plan was required. (See reports provided by Hart-Crowser & Associates to Washington State Department of Transportation, J-1210-09 and J-1210-10, dated November 15, 1984 and October 31, 1985, respectively).

In a separate report to the Department of Ecology (Report J-1616, dated December 31, 1985) Hart Crowser & Associates concluded that the soils at 2115 Dock Street and the adjacent City Park (on the southwest end of City Waterway) were also contaminated. "Old timers" remember waste from the nearby coal gasification plant being deposited in this area. In addition, contaminants were detected in soil samples taken at 1821 Dock Street. The validity of the data in this report is currently the subject of a lawsuit. If it is substantiated, remedial action will likely be required by regulatory agencies.

Remedial action follows an assessment of the nature and extent of the contaminants involved. Based on the results of an assessment, regulatory agencies issue a request for a response action, whenever a responsible party is available. Possible responses include: removal to a hazardous waste disposal facility (if appropriate); isolation in a concrete vault; soil capping; slurry cut-off walls; in-situ treatment; hydraulic barriers; and long-term groundwater monitoring. A combination of these may be required. Based on initial volume estimates of contaminated soils at 2115 Dock Street and the adjacent city park, clean-up costs could range from $5.5 million

(complete removal to hazardous waste disposal facility) to $125,000 (a 30 year groundwater monitoring program). A figure of $1 to 2 million is probably realistic for the other responses listed above.

Remediation is generally the responsibility of the owner of the source. After determining what the problem is, the responsible party must be identified. In areas like City Waterway, with a long history of industrialization, it may be impossible to determine the actual pollutant source. In some cases, the perpetrator of a past practice is no longer available, as for example, when a company goes out of business. In other cases, pollutants may be introduced through groundwater migration with no immediately identifiable source.

Data is limited, but other sites on City Waterway are highly suspect because of known, past industrial practices. For example, in 1978, the North Pacific Plywood Company, formerly located at 1549 Dock Street, was ordered by Ecology to remove contaminated soils around a glue tank (Docket No. DE 78-162). Recently the American Plating Company (2110 E. D. Street), was closed by the Tacoma-Pierce County Health Department. Properties north of 15th Street, on the east side of the waterway are also areas of concern, including the tank farm at the D Street Petroleum facility.

In City Waterway, the environmental issues pose developmental problems both real and imagined. Development in and over-the-water is severely constrained by the ongoing Superfund efforts. In many respects, development will be curtailed until these issues are resolved. Development on uplands with contaminated soil is also constrained. Although, as discussed above, there are few upland sites with confirmed problems, there is speculation regarding the potential for a number of problem sites given past industrial practices. Highly publicized events, such as the SR-705 clean-up effort and the Superfund activities have acted like a red flag to the development community. There is hesitancy and apprehension on the part of landowner and investor alike. The fact is, no one really knows how bad the upland situation may be and it will be expensive to find out.

Land Ownership Disputes

The Puyallup Tribe has asserted its claim to the tide flats of Commencement Bay. Included in this claim is the east side of City Waterway. While ongoing negotiations seek a settlement to this issue, the ownership of lands within the disputed area is clouded. Consequently, financial institutions are reluctant to provide financing.

For purposes of this study, the affected shoreline areas extend from the south end of City Waterway, up the east side to South 15th Street. Development along this waterfront will continue to be constrained until a solution is reached.

Parking

A significant issue in the development of most of the Ruston Way, Schuster Parkway, City Waterway shoreline is whether or not there is sufficient area for parking. Parking tends to require a large amount of land, a resource which is scarce on much of the subject shoreline. An additional problem is the isolation of the shoreline from commercial and residential areas which could absorb some of the parking pressure through on-street parking.

Ruston Way

The lack of sufficient land area for parking is a major constraint to development of Ruston Way shoreline properties. A bluff separates the shoreline area from the nearby residential neighborhoods, and the flat bottom land below the bluff is generally quite narrow. Much of the land at the base of the bluff is already dedicated to transportation corridors (the Burlington Northern Railroad and the Ruston Way arterial), leaving little space for waterfront structures and parking facilities. The lack of available land for parking has imposed a severe constraint on development in the Ruston Way area, and it may be one of the most prominent reasons why so many waterfront properties have remained vacant.

One method for accommodating the parking in the shoreline area is to build plank and piling structures over-the-water. This method of providing parking is quite expensive and only the highest, cash generating private enterprises can amortize such high parking lot costs. Industrial uses, multi-residential development, and some other nonwater-dependent uses such as office buildings, may provide enough revenue to justify such an expensive parking solution. However, industrial (except on the ASARCO property) and residential development is prohibited on Ruston Way and the regulations confine nonwater-dependent uses (e.g. office buildings) and associated parking to upland locations.

Only if the land owner can demonstrate that extraordinary circumstances exist, which preclude all other reasonable use of the property, can a nonwater-dependent use be approved over-the-water on Ruston Way [Chapter 13.10.180.B.2.]. Otherwise, only commercial water-dependent and water-related uses (with associated parking) can be permitted on piling over-the water, provided the development complies with all of the applicable standards in the Shoreline Master Program [Chapter 13.10.175.B.11.a.(3).(a)]. In such cases, if parking cannot be accommodated with the structure, it must be placed on the landward side. If there is no area on the landward side, parking could be approved alongside a development, but in no case can the parking lot extend further seaward than the development. [Chapter 13.10.175. A.7.c.& d.].

Compared to pile construction, landfill is a less expensive solution to the parking problem on Ruston Way. However, landfill is subject to the same restrictions as over-the-water pile construction. In both cases, it can only be approved for water-related and water-dependent uses. Therefore, developments which are nonwater-dependent are unable to locate on the Ruston Way shoreline. Most of the parcels simply do not have enough dry land area to support a nonwater-dependent use and the necessary parking.

It should be noted that over-the-water pile construction and landfill are also regulated through the federal Rivers and Harbor's Act (Section 10) and the Clean Water Act (Section 404). Section 10 regulations could allow

nonwater-dependent uses over the water, provided the structure was supported by piling and no aspect of the project involved fill. If fill is involved, then Section 404 is triggered, which prohibits the action for nonwater-dependent uses. An exception can be granted if it is demonstrated that there is no other reasonable use of the property.

The City of Tacoma, realizing that parking is a problem for shoreline development, has allowed property owners to lease street right-of-way for parking lot construction. Through the street occupancy permit process, a property owner can use the city owned right-of-way for a specified yearly amount. Since the owners receive a lease credit of one half of the construction cost for the parking on city land, they do not have to make lease payments for a number of years. This approach by the city has made it easier for the waterfront owners to develop their property and provide the required amount of parking.

In many urban situations commercial establishments accommodate overflow parking through on-street parking. Ruston Way, as presently constructed, does not have the width to accommodate on-street parking. In fact, for nearly the entire shoreline length, no on-street parking is available to the public. Furthermore, adjacent areas are separated from the shoreline by a high bluff. There are trails from the top of the bluff down to the shoreline. However, these are used primarily by residents of adjacent neighborhoods. Visitors to Ruston Way are unlikely to park in upland locations and walk the distance to the shoreline.

Recent data show that available parking spaces at or near some activity locations along Ruston Way do not always accommodate the parking demand. The Ruston Way Parking Survey conducted in June of 1987 by the City of Tacoma Traffic Division shows that illegal spill-over parking takes place at several locations along the waterfront. On Friday, June 5, 1987, between 6:00 PM and 8:00 PM, an average of 17 cars were illegally parked near a popular restaurant. At the same time, an average of 66 of the 68 legal spaces at that location were in use. That same evening, illegal overflow parking was also observed at the Brinkley building and at the Marshall Street right-of-way.

The lack of overflow parking alternatives appears to be forcing people to park illegally in times of high parking demand.

Much of the illegal parking shown on the city's parking survey most likely took place on the Burlington Northern right of way between the tracks and Ruston Way. In some parts of the right-of-way, there is clear evidence that the land is already being used for parking. Because this strip of land is valuable for the development of both parking and open space, the city has already purchased easements from Burlington Northern. These easements cover most of the strip between the Ruston Way and the tracks from Commencement Park to ASARCO. This land gives the city the flexibility to develop formal parking lots in some of the high demand areas along the waterfront.

For about half the length of the Ruston Way shoreline, an unused railroad spur controlled by ASARCO, runs between the Burlington Northern Tracks and Ruston Way. The city could continue investigations for acquiring these tracks and related right-of-way through lease or purchase. If the tracks were removed, a significant amount of additional land would become available for the development of parking.

Another approach the city could use to increase available parking in the shoreline area would be to widen Ruston Way, reduce speed limits, and to add on-street parallel or angled parking. Since only certain portions of the shoreline have an excess demand for parking, road improvements could be timed to coordinate with overall development. If this approach is taken, the use of city right-of-way for on-street parking on the seaward of Ruston Way should take into consideration potential parking lot development by landowners. On-street parking development decisions for the landward side of the arterial should consider alternative opportunities for the use of the city and Burlington Northern right of way.

An "activity node" approach to shoreline development may lend itself to the efficient provision of parking facilities. With low to medium density development along the shoreline, there may be no one location at which a multi-level parking structure could be economically developed. It may be

unreasonable to assume that people would be willing to pay for parking and then walk a significant distance to their shoreline destination. However, there are several locations along Ruston Way where development activities could be focused. For example, the Old Town Dock/Carr's Landing/Dickman Mill area might have the potential to become an "activity node" which could support a nearby parking garage.

Once an "activity node" becomes established and a centralized parking facility is built, standards for the provision of parking spaces for developments within walking distance of that facility could be lowered. In lieu of providing the full amount of spaces required by present code, area businesses could subsidize the parking facility by customer validation and other means. This could stimulate development in the "activity node" area by reducing the capital costs for the provision of parking.

Schuster Parkway

Schuster Parkway has not experienced the parking problems of Ruston Way, primarily because the existing uses do not attract the public and there is sufficient land to accommodate the limited number of employee vehicles.

There could be future parking problems, depending upon the amount of traffic generated by a new development. There is quite a bit of dry land on the north and south ends of the Schuster Parkway shoreline segment. However, proposed development would not be able to rely on adjacent lands to accommodate over-flow parking. There is little available right-of-way between the road and the railroad tracks. (Lack of available right-of-way eliminates the possibility of leasing such lands from the City of Tacoma). Nor does the railroad have much right-of-way available. Sandwiched between the shoreline properties and Schuster Parkway, the railroad right-of-way is utilized almost entirely for mainline tracks.

Shoreline Master Program regulations allow for over-the-water construction or landfill to accommodate parking when it is associated with a commercial water-dependent or water-related use. In addition, industrial and commercial

nonwater-dependent uses on pilings with associated parking, could be approved as a conditional use. However, as with Ruston Way, landfill is only permitted for water-dependent and water-related activities.

Road access to shoreline properties is probably a bigger issue for development on Schuster Parkway because so few access points presently exist. Gaining easements across the railroad tracks is one problem. Another is the traffic congestion which would likely result if vehicles turning off Schuster Parkway were forced to wait while moving trains blocked the access point.

To avoid railroad crossings at the north-end Schuster Parkway, it may be practical to improve the small access road which comes off Ruston Way and which runs behind Commencement Park to the National Guard site and the Sperry Ocean Dock. At the south-end of the shoreline segment the existing crossing to the Continental Grain Elevator may be sufficient to service the waterfront properties immediately to the north.

City Waterway

The City Waterway area does not have the parking limitations of Ruston Way or Schuster Parkway. However, parking is presently taking up a large amount of the available dry land along the shoreline. If commercial and people-oriented businesses begin to locate on the waterfront, parking will become a more critical concern.

Future parking demands may require the development of large parking lots in the vicinity. Possibilities include using the land under the elevated portions of SR-705 or areas adjacent to the south-end and east sides of City Waterway. The proximity of downtown Tacoma to the west-side of the waterway lends itself to the possibility that existing parking facilities could be used, provided there is safe and easy access to the shoreline.

Pedestrian Access

The high bluffs which typify so much of the Ruston Way, Schuster Parkway, City Waterway shoreline segments pose an impediment to pedestrian access from upland areas. On City Waterway the only reasonable access to the waterfront is by car. Adequate pedestrian access between the uplands and shoreline properties would greatly enhance the chances of successful waterfront development. People in the downtown commercial district would find it easy to patronize shoreline businesses, and by walking rather than driving to the waterfront, parking pressure on City Waterway would not be as great. As discussed above, this will become increasingly important as more development takes place along the subject shoreline.

Of the three shorelines under consideration, the need for pedestrian access is greatest on the west side of City Waterway. Major impediments separate this shoreline from the heart of downtown Tacoma. These impediments include Dock Street, multiple railroad tracks, the SR-705 Tacoma Spur, and a steep bluff. These act as both physical and psychological barriers.

There is a stairway under the 11th Street Bridge which leads from the uplands to city property next to Municipal Dock. It is not known how frequently this access is used, although it was observed that the dark and circuitous climb did not appear inviting. Another pedestrian access point is proposed as part of the Union Station redevelopment project. During the construction of SR-705, funds were put aside to build a walkway from the second floor of the Union Station, over the highway to the waterfront. To accommodate the walkway, SR-705 (which is elevated for most of its length), dips down to ground level in the vicinity of the Union Station. The State Department of Transportation will build the walkway once its exact location and design is determined.

Other ideas for improving access between downtown Tacoma and the City Waterway shoreline have been suggested. It has been pointed out that there are several points along the top of the bluff where a hill climb, spanning the transportation corridors below, could be built. The structure could be

terraced, providing several levels of shopping, small eateries and landscaped public viewing areas. Another suggestion is for a cable-car connection.

On Schuster Parkway, a formal trail system built in 1975 provides public access to the uplands. The trails are located on the slopes abutting Schuster Parkway and extend from the entrance at Fifth Street and Stadium Way to Garfield Gulch. These trails are owned by the City and regularly maintained by the Metropolitan Park District. Trail heads are located at Garfield Gulch, Schuster Parkway, Stadium Way, the Washington State Historical Society Museum and at an access point near Stadium High School.

At this time the trail system appears to adequately serve the upland residential communities. The pathways up the bluff allow people to walk down to Schuster Parkway and from there to Ruston Way or City Waterway. Apparently there are minor problems associated with maintaining the paths and preventing vandalism.

On Ruston Way a series of trail systems also link the shoreline to the upland residential communities. The paths wind through the three natural gulches which cut through the intervening bluff. From north to south these are the Mason, Puget and Buckley Gulch corridors. At McCarver Street it is also possible to access the shoreline from the adjacent commercial center of Old Town Tacoma. As with Schuster Parkway, the trail system on Ruston Way seems to work well for the adjacent neighborhoods, with similar problems requiring trail maintenance..

Public Transportation

One solution to easing existing and potential parking problems as well as encouraging use of the subject shorelines (particularly City Waterway) is to provide public transportation. If the Tacoma shoreline experiences higher levels of development, which provide increased opportunities for people to enjoy the shoreline, public transportation to the area could be an asset. A shuttle bus could link the waterfront with upland areas and stop at key activity centers along the shoreline.

Pierce Transit, at present, has no regular bus service in the City Waterways area, or along Schuster Parkway or Ruston Way. The closest bus access point to the Ruston Way waterfront is along the #13 bus route at the intersection of McCarver and N. 30th in the Old Town area. Apparently potential ridership would not support regular service bus line, running along the shoreline from the Point Defiance area to downtown Tacoma. The main problem is the lack of residential neighborhoods along the route to build a passenger base.

Pierce Transit was involved in a demonstration project in the summer of 1987 to provide a shuttle bus service between downtown Tacoma and waterfront locations. The free week-end service ran along Pacific Avenue, Schuster Parkway and Ruston Way all the way to the Pt. Defiance Zoo. The service schedule was from 10:00 am to 6:00 pm on Saturday and Sunday with one hour intervals from July 15 through labor day. A similar shuttle service with 20 minute intervals was provided each Wednesday from 10:00 am to 2:00 pm to encourage downtown workers and tourists to enjoy the shoreline during the midday hours. The final destination of this service was The Lobster Shop on Ruston Way.

The analysis of ridership showed that these buses had weak but consistent patronage last summer. It was found that workers using the luncheon service tended to eat a "bag lunch" at the waterfront rather than to eat at the shoreline restaurants. The increased amount of time needed to take the shuttle bus probably explains why the restaurant users preferred to take their cars.

The shuttle service will be resumed during the summer of 1988. It will operate from June 1 through Labor Day, on weekends from 11 am to 6 pm. A lunch-time service run will also be provided on Wednesdays from downtown Tacoma, via Dock street to the end of Ruston Way. A strong promotional effort will be made by the Tacoma News Tribune to encourage ridership.

If this type of bus service is to have an impact on the existing Ruston Way parking problem, peak period service for Friday and Saturday evenings may be needed. At present, no serious thought has recently been given to having the

service continue through these high parking demand times. It is felt that people would not like to return downtown on a bus in the dark to pick up a car.

Extrapolating from the ridership analysis of Pierce Transit, a more continuous shuttle bus service to the shoreline may not significantly reduce the need for parking at the waterfront restaurants. But such a service could improve the access to public areas along the shoreline without increasing parking demand. Eventually, if the shuttle becomes popular enough, year round scheduling may become an option.

One transportation option for increasing shoreline access as well as shoreline enjoyment would be the development of a shuttle boat from City Waterway to Point Defiance Park. It could be similar to the "Emerald Queen" sternwheeler which runs during week-ends on Seattle's Lake Union, making stops at four lakefront restaurants. A nominal fee, subsidized either by the City or by the shoreline businesses, could be charged. This type of service could increase shoreline access and enjoyment for the general public and could possibly have impacts on the reduction of parking demand at shoreline businesses.

Another option, though possibly more difficult, would be to run a streetcar or passenger train up and down the shoreline during specified peak hours. It could be similar to the Alaskan Way streetcar which runs along Seattle's waterfront. Stopping at activity centers, the train could be a tourist attraction and a shuttle system for remote parking facilities. Gaining access to the Burlington Northern tracks may be difficult and limit the feasibility of this option, although use of the ASARCO spur line on Ruston Way may be possible.

CONCLUSIONS

Laws and regulations dealing with shoreline management stress that priority should be given to industrial and commercial businesses which need a shoreline location. However, many of these water-dependent and water-related

businesses require a great deal of land area, protected moorage or regular rail service and can be incompatible with adjoining residential uses.

The suitability analysis for Ruston Way shows that most of shoreline segment has all of the above listed drawbacks. Only the ASARCO property has enough land area and rail access to support a cargo terminal, a major shipbuilding operation, a water-related manufacturing plant or other use not dependent on protected moorage. The Tacoma shoreline regulations specifically allow for industrial uses on the ASARCO property (while prohibiting such uses on the rest of Ruston Way). New industrial water-dependent or water-related uses on the ASARCO property would still be required to be compatible with adjacent neighborhoods. The one water-dependent activity which surfaced as probably being acceptable from a compatibility standpoint and suitable given the limitations of Ruston Way was a cruise ship terminal.

While the ASARCO property may hold potential for water-dependent and water-related uses, it is currently the subject of a Superfund clean-up effort. It is not known how long this will take or how it will affect the future development of the property. The rest of the Ruston Way segment is not recognized as having the contamination problems of the ASARCO portion but there are other development difficulties.

As noted above, Ruston Way is not well suited to many water-dependent and water-related uses. However, developers wanting to build nonwater-dependent uses also encounter difficulties. Unlike provisions for water-dependent and water-related uses, the Master Program does not permit landfill or over-the-water construction for nonwater-dependent uses. Therefore, nonwater-dependent uses must be placed on dry land. With the limited amount of dry land available on Ruston Way, it is often difficult to site the nonwater-dependent element and still provide for associated parking.

If provisions could be made for parking, it is likely that a number of nonwater-dependent uses could locate on Ruston Way, including professional offices, commercial outlets and retail establishments. (Note: restaurants do not fall into this category because the Master Program considers such uses to

be water-related. Therefore, a certain amount of fill can be permitted to provide for parking.)

The Schuster Parkway segment has not experienced the parking problems of Ruston Way, primarily because the uses located along this shoreline do not attract the public or generate a great deal of employee traffic. There is also more available land area to absorb potential future demands. However, this capacity is limited and depending on the scale of development, available land area may not be sufficient. Shoreline regulations pertaining to Schuster Parkway permit industrial uses when compatible with adjoining residential neighborhoods. Potential water-dependent and water-related uses include those that require deep-draft moorage but not necessarily protected moorage or a great deal of land area. A cruise ship terminal would be suitable, and if the compatibility problems with adjacent residential uses can be resolved, water-related manufacturing, fish processing and major shipbuilding would be appropriate.

City Waterway presents a complexity of development issues. On the one hand there are attributes which make it ideally suited for water-dependent and water-related uses. Chief among these are protected moorage, adequate dry land and the lack of incompatible uses in the vicinity. On the other hand, the waterway is shallow and uses requiring deep-draft moorage (e.g., major shipbuilding and cargo terminals) would only be able to locate on the extreme northwest end of the waterway. From the standpoint of water-dependency and water-relatedness criteria, the south half of City Waterway is best suited to shallow draft moorage (e.g., recreational boating and possibly fish processing) while the north half could accommodate cruise terminals, tug and barge terminals, commercial shipbuilding, and possibly water-related manufacturing.

Shoreline regulations for City Waterway do not allow industrial uses, encouraging instead a mix of public and private commercial uses. In this respect, the water-dependent and water-related uses which could be permitted include marinas, tug and barge terminals, cruise ship terminals and possibly fish processing. Development of these uses as well as nonwater-dependent

commercial and residential activities could occur on City Waterway. The fact that development has not occurred can be attributed in part to environmental concerns and the fact that City Waterway is separated from downtown Tacoma.

Known environmental problems in the sediments of City Waterway are being addressed by public agencies. There are still a number of unknowns, particularly with regard to the condition of upland properties. The specter of high clean-up costs, uncertainties regarding the regulations, difficulties in determining the responsible party and time delays are all factors which have led investors to look upon City Waterway with a cautious eye.

The fact that City Waterway is isolated from downtown Tacoma does not improve the chances for redevelopment of the area, particularly for uses which would attract the public. Except for the walkway under the 11th Street Bridge, pedestrians do not have direct access between the two areas. As clean-up efforts along City Waterway progress and suitable development takes place, the success of the business that locate there will be enhanced by easy and inviting pedestrian access between downtown Tacoma and the waterfront. A regular public transit route to the area may also encourage the movement of people to the shoreline areas.

The one development issue that was not factored into the above analysis was the economic picture. It is discussed in the following section and should be viewed as an overlay on the analysis presented above.

Section VI:
Existing Economic Conditions and Future Economic Trends

SECTION VI

EXISTING ECONOMIC CONDITIONS AND FUTURE ECONOMIC TRENDS

SUMMARY

- Tacoma has historically been the major economic and employment center for Pierce County. Over the last 15 to 20 years, Tacoma has been losing its traditional share of manufacturing employment in most sectors. As a consequence, manufacturing, and particularly the resource based industries, have shown only a modest performance county-wide over this time period. Employment increases in the fast growing non-manufacturing sectors have been somewhat less in Pierce County than in the other counties in the region.

- The Tacoma/Pierce County area has a number of economic assets. These include an excellent deep water port, available industrial land, good transportation facilities, abundant timber, cheap electricity, local military bases, and its proximity to other major metropolitan areas. According to recent studies, growth opportunities related to these assets appear to exist for international trade, port activities, and seafood processing. More general growth opportunity areas are in business services, computer electronics, light industries and convention trade.

- The most recent draft employment forecasts by the Puget Sound Council of Governments (PSCOG) show that Pierce County is keeping up with the rest of the Puget Sound region in overall employment growth in the 1980's. These forecasts suggest that Pierce County is beginning to turn the corner economically. In the longer term, 1990 to 2000, Pierce County is anticipated to do about as well as the region as a whole.

- While no employment growth took place in the Tacoma central business district in the decade of the 1970's, the draft PSCOG forecasts project

this central area to grow 21 percent in the 1980's, and 17 percent in the 1990's.

- Strong optimism exists for future employment growth in the industrial areas of Tacoma, particularly the Port area. The City of Tacoma is forecast to provide a large share of the County's future employment growth. However, forecasts do not project a large increase in the population of Tacoma. The assumption is that people will work in Tacoma but probably not live there.

- City Waterway, Schuster Parkway and Ruston Way have an important role to play in the redevelopment of downtown Tacoma. Not only do these shoreline areas have the potential to capitalize on tourist opportunities but they could also attract a segment of the population who would choose to live in a dynamic urban environment.

INTRODUCTION

A number of recent studies, plans, and reports have been compiled on the topic of economic development in Tacoma and Pierce County. Among these publications are an economic assessment of Pierce County, a strategic economic development plan for Pierce County, a report on strategies for Tacoma's economic development and an assessment of downtown Tacoma's development potential. Various public agencies and private organizations in the county have been involved in these studies reflecting a strong local commitment to the encouragement and stimulation of economic development in Pierce County.

The economic studies and reports make a number of findings about the local economy. The findings include discussions both of the area's economic assets which would tend to stimulate growth and of the constraints or liabilities which may inhibit future economic growth. By using the assets and dealing creatively with the liabilities, it is suggested that the area has a reasonable chance to prosper economically in the near future. A consistent thread of these reports is that the economic development of the Tacoma/Pierce County area has not yet been fully realized.

The Tacoma area is generally considered to have the following assets. It has an excellent deep water port, available industrial land, good transportation facilities, abundant natural resources and cheap electricity. The local military bases, the skilled and educated labor force, and the pro-business climate in the area are considered positive economic factors (Pierce County Department of Economic Development 1986a).

Growth opportunities for the Tacoma area appear to exist for international trade, port activities, seafood processing, and convention and tourist trade. Additional growth opportunities exist for the area are related to business services, computer electronics, light industries and other services (Ibid).

A number of liabilities of the Tacoma/Pierce County area are also discussed in the above studies. The area has relied on declining resource based heavy industry for its economic health. Thus, economic growth has lagged. High wages, high unionization, a lack of attractive industrial parks and conservative financial institutions have all been partially responsible for this economic lag. One of the most significant factors affecting the economic growth of the region may be the negative perception of Tacoma created by the air pollution in the port area (Pierce County Department of Economic Development 1986a; Ibid).

ECONOMIC STRUCTURE AND EMPLOYMENT

Information on the economic structure of the Pierce County economy can be somewhat confusing. The data come from various sources which have different sector definitions and different time spans. Overall, the available data support the contention that the traditional manufacturing industries are on the decline.

Total non-agricultural wage and salary employment in Pierce County has increased from about 105,800 in 1970, to about 163,400 in 1986; a 2.7 percent average annual increase (Table 13). Over approximately the same time period (1967-1984), the annual average employment growth for other counties in the region was 2.5 percent for King County, 3.9 percent for Kitsap County and 5.0 percent for Snohomish County (Table 14). Based on overall employment, Pierce County has had mediocre economic growth in this time period. However, looking at the manufacturing sector alone gives a slightly different picture.

Between 1967 and 1984, manufacturing employment in Pierce County increased at 0.3 percent per year. Kitsap and Snohomish Counties have shown substantial increases (3.3 percent per year and 4.2 percent per year respectively). For comparative purposes, King County lost manufacturing employment in this time period at a rate of about 1.1 percent per year. This loss was due in part to aerospace employment changes at Boeing in the late 1960's.

From Table 13, the only growth areas for Pierce County manufacturing employment, since 1970, have been "fabricated metal" and "other manufacturing". Table 14 shows similar results. Significant losses in manufacturing employment have been experienced in most of the other sectors. With changes taking place over time in the structure of the State and U.S. economies, these losses may only be reflecting state and national trends.

To determine whether employment losses in the manufacturing sectors of Pierce County were deflected in the Tacoma economy, a shift share analysis was used. Data on Tacoma's share of Washington employment was available for the period of 1970 to 1983 (Table 15). Since Tacoma is the industrial center for Pierce County, any significant county-wide trends in manufacturing would be reflected in Tacoma data. The Tacoma data shown in Table 15 can be compared with Pierce County data for the same period on Table 13 to give a true picture of the local economy.

Table 13 shows a decline in the overall Pierce County employment in "lumber and wood products". Between 1970 and 1986, employment fell from 5,200 to 4,500. However, in this same period, Tacoma's share of the State's employment in this sector actually rose from 10 to 11 percent (Table 15). Therefore, the loss of employment in this sector was probably due to statewide rather than to local factors.

The strength of the Pierce County manufacturing economy has clearly been in the fabricated metal sector. From 1970 to 1983, Pierce County employment increased from 1,100 to 1,900. In this time Tacoma's share of the statewide fabricated metal sector increased from 7 to 10 percent.

For other manufacturing sectors, share losses have taken place. County-wide employment in primary metals decreased from 1,900 to 1,500 while Tacoma's share of statewide employment in this sector was reduced from 14 to 12 percent. The loss of 400 jobs in chemicals and allied products is reflected in a major loss in Tacoma's statewide share (from 14 to 8 percent). County-wide job losses in paper and allied products are similarly reflected in state share losses for Tacoma.

From 1970 to 1983, Tacoma's share of total statewide manufacturing employment decreased from 8 to 7 percent. The overall picture from the shift share data from Table 15, is that Tacoma is losing its traditional share of manufacturing employment in most sectors. Clearly, Tacoma and Pierce County have not been able to rely on their traditional industries for economic growth.

In comparing non-manufacturing employment growth among the counties (Table 14), Pierce County has had the lowest growth rate (3.2 percent per year). Growth rates were: 3.7 percent for King; 3.9 percent for Kitsap; and 5.3 percent for Snohomish. Of the high job producing sectors (retail trade, services, and government) Pierce County has been able to match the growth rate of King County in all but government. Growth rates for Snohomish and Kitsap were substantially higher in all three sectors. Overall, Pierce County has not received its share of regional growth in the non-manufacturing industries in the 1967 to 1984 period.

The Puget Sound Council of Governments (PSCOG) is the agency within the region which produces the most broadly accepted set of employment forecasts. The latest official forecasts were completed in 1984, but a preliminary set of revised forecasts has now been produced and is under review by member agencies. The revised forecasts were based on the latest information and, as such, should reflect the latest trends. Since substantial differences exist between the 1984 and 1987 forecasts, both sets of forecasts are presented.

The 1984 series growth forecast for the 1980 to 1990 period has been substantially revised in the preliminary 1987 forecast updates. The anticipated growth in employment for the ten year period has been increased from about 15 percent to about 26 percent for the entire region, and from about 14 percent to about 26 percent for Pierce County. The county with the highest anticipated growth rate for this period is Kitsap County at 31 percent. These figures show that Pierce County will most likely keep up with the rest of the Puget Sound region in overall employment growth in the 1980's. Since

the PSCOG forecasts are presumably based on the latest available trends, this gives reason for optimism for the near future.

In the longer term, 1990 to 2000, Pierce County is again anticipated to do as well as the region as a whole. The forecasts show Pierce County growing either 23 percent (1984 series) or 21 percent (1987 series) and the region as a whole growing either 24 percent (1984 series) or 22 percent (1987 series). Pierce County employment growth is also anticipated to be strong well into the twenty first century.

The overall conclusion about the Pierce County economy is that manufacturing, and particularly the resource based industries, have shown only modest performance over the last 15 to 20 years. Employment increases in the fast growing non-manufacturing sectors have been somewhat less in Pierce County than in the other counties in the region. However, employment forecasts show that overall employment growth for Pierce County is expected to keep pace with that of the region as a whole in the foreseeable future. Since the Puget Sound region is considered a moderately fast growing area nationally, the economic future of the county seems to look fairly bright.

INCOME, POPULATION AND HOUSING

One significant factor in an area's economy is income level. Income is not only a reflection of economic activity, but it also reflects purchasing power and the potential for certain types of commercial businesses to flourish in an area. The income statistics used in this analysis have been adjusted to 1982 dollars in order to remove the effects of inflation.

Personal income per household (in 1982 dollars) for Pierce County peaked at $31,170 in 1969 and has been stable with some slight declines since then (Table 17). In contrast, the three other counties in the region (Kitsap, King and Snohomish) have shown increases in household income in the 1970's, peaking in 1979. This trend which shows Pierce County slipping in its income position, is often interpreted to be a consequence of the long term loss of high paying industrial jobs. By 1985, household income in Pierce County

($29,261) was still lower than Kitsap County ($30,925), Snohomish County ($31,516) or King County ($35,772).

Current income levels in Pierce County are low for the Puget Sound region as a whole. This situation may be impacting consumer demand for business activities in the non-manufacturing sectors, and it may subsequently be impacting the job creation potential for those sectors.

Population in Pierce County grew moderately (about 18 percent) from 1970 to 1980. This growth is about 9 percent higher than the growth rate for King County. The fastest growing counties in the region were Snohomish (27 percent) and Kitsap (45 percent). For the 1980 to 1990 period, Pierce (based on the 1987 series) is expected to grow by 17 percent, 1 percent lower than that anticipated for the region (Table 18). The two fast growing counties are both anticipated to grow by about 26 percent in the decade.

Household growth in the decade of 1970 was substantially higher than population growth in the four Puget Sound counties because average household size was decreasing.

From 1970 to 1980, the number of households in Pierce County increased by nearly 40 percent, as shown in Table 19. This increase was somewhat larger than the increase (34 percent) for the region as a whole. For the next two decades, the 1980's and the 1990's, household growth for Pierce County is anticipated (1987 series) to be about the same as for the region as a whole: 25 percent for the 1980's and 22 percent for the 1990's.

Tacoma, because it has been substantially developed for some time, has not shown strong growth for the 1970 to 1980 period. While households did grow nearly 16 percent in this decade, population grew less than 2 percent. For the next two decades, households in Tacoma are forecast to grow 10 percent and 13 percent. Tacoma population is forecast to increase only 2 percent in the 1980's and only 4 percent in the 1990's.

The anticipated growth in both households and population for Pierce County in the coming years is substantial but somewhat moderate in comparison to the faster growing counties of Snohomish and Kitsap.

COMMUTING PATTERNS

One economic report suggested that if Pierce County were able to become more of a bedroom community for King County and Seattle, additional growth could take place independent of basic industrial growth (Carlson 1983). This theory can be reviewed in light of the available census data on commuting patterns.

Of the nearly 200,000 daily work trips originating in Pierce County in 1980, only 8,174 had Seattle as the destination (Table 20). About 20,000 had a destination in other King County locations. By contrast, 34,524 of the 146,309 Snohomish County based commuter trips had a destination in Seattle. (Snohomish County has traditionally been more of a bedroom community than Pierce County.) The ratio of trip destinations per trip origins (similar to an area's jobs per employed worker living the area) in 1980 was much greater for Pierce County than for Snohomish County, .89 to .76. (Seattle's ratio was 1.54 reflecting it's position as a regional employment center.)

While Pierce County as a whole produces slightly more workers than jobs, Tacoma is in the reverse situation. Tacoma is a significant regional employment center, producing about 89,000 daily jobs trip ends while producing only 63,000 home based work trip ends (Table 21). A large percentage of Tacoma workers come from within the city or from areas in close proximity to the city (Table 22).

TACOMA

Despite recent manufacturing employment losses at ASARCO, Tacoma Boat and others, the Tacoma economy has recently shown strong resilience. While the downtown area has not fared particularly well, significant economic strength has come from the Port of Tacoma.

The City of Tacoma continues to be the major employment center for the Pierce County. The PSCOG 1987 series forecasts (Tables 16 and 18) show that in 1980, there were 80,109 jobs in this city of 159,337 people (a jobs per capita ratio of .50). For Pierce County as a whole, the ratio was .35. For comparative purposes, Seattle, the region's most concentrated center of employment, had a jobs per capita ratio in of .81 in 1980. Employment growth for Tacoma (1987 series in Table 23) is forecast to be 24 percent for the 1980's and 17 percent for the 1990's. County-wide growth for these time periods is anticipated to be 26 percent and 20 percent respectively. Tacoma's percent of total county employment is anticipated to decrease slightly over time, from 46.7 percent in 1980 to 44.4 percent in 2000. However, the employment concentration, measured by the number of jobs per capita in an area, is forecast to significantly increase for Tacoma. Tacoma's population growth, forecast to be only 4 percent per decade from 1980 to 2000, is expected to be outstripped by the employment growth. By the year 2000, the city's jobs per capita ratio is forecast to be .67. These forecasts suggest that Tacoma will grow as a major employment center in years to come.

Tacoma's central business district (CBD) is anticipated to receive a significant portion of this growth. While no growth took place in CBD employment in the decade of the 1970's, the 1987 series forecasts the area to grow from 27,730 in 1980 to 33,731 in 1990, a 22 percent increase. This is a major change since the 1984 series, when the CBD was forecast to grow by only 3 percent in this the decade. This adjustment in the Tacoma CBD forecasts by PSCOG reflects both the recent CBD development activities and the greater general optimism for the area's viability.

The Port of Tacoma has been a mainstay in the economic development and growth of industry in Pierce County. Securing Sea Land from Seattle was an example of the Port's strength and competitive ability. In addition to the lands the Port uses for its activities, there is a large amount of vacant industrial land in the area which is available for industrial development. The revised PSCOG forecasts clearly show that continued growth is expected for the Port

and its surrounding areas. From 1970 to 1980, the Northeast Tacoma area, which includes the Port, grew in employment from 14,840 to 21,390. By 1990 employment is anticipated to reach 28,333, and by 2000 it is expected to be 35,506. Employment growth rates for these two decades are forecast to be 32 percent and 25 percent respectively.

RUSTON WAY - SCHUSTER PARKWAY - CITY WATERWAY

The decline in manufacturing and particularly resource based industries, is reflected in the land use changes which have taken place along Ruston Way, Schuster Parkway and City Waterway. Lumber mills and boat builders made up the bulk of the closures on the Ruston Way and Schuster Parkway shorelines. Since these activities were a predominant feature of the waterfront, the character of the shoreline was altered dramatically as a result of the changing economic climate. Together with the closure of ASARCO (which was the result of environmental requirements and economic conditions), Ruston Way no longer supports any manufacturing or resource based industries. The grain elevator is the only active, resource based industry remaining on Schuster Parkway.

An examination of the land use changes which have taken place in City Waterway reveals a mixed pattern. On the one hand, there has been a decrease in the number of manufacturing and resource based industries. As reported in Section III of this study, over the last 25 years closures in this category have included: a lumber mill, a plywood manufacturer, a pressboard plant, a concrete batch plant, a foundry, and an electroplating company. On the other hand, many of the activities which ceased operation in City Waterway involved uses which were primarily involved in the handling of goods delivered by ship or barge. Uses of this nature were not as affected by the decline in manufacturing and resource based industries as they were by the development of the modern Port of Tacoma. It is probably reasonable to assume that the closure of shipping interests and associated activities on City Waterway was the result of competition or relocations to the port area.

As mentioned previously, growth opportunities for Tacoma appear to exist for international trade, port activities, seafood processing, light industry and convention/tourist trade. The Port of Tacoma is uniquely suited to supply the necessary land area and facilities required by shipping interests and light industry. The Ruston Way, Schuster Parkway and City Waterway shorelines have the potential to become a magnet for the convention and tourist trade.

Many public amenities and attractions are already in place along Ruston Way and can be expected to continue to attract visitors to the area. City Waterway is also uniquely situated and particulary well suited for redevelopment as a focal point for visitors to Tacoma. One important aspect of this shoreline is the fact that it is visible from major approaches to the city as well as from many vantage points within the city. Another attribute is its proximity to the central business district, major hotels and the Tacoma Dome. If access is improved between the downtown area and City Waterway, pedestrian movement will be able to flow easily from one activity node to the other.

Other assets which favor the redevelopment of City Waterway for the tourist trade is the fact that major transportation corridors lead directly to the area. Amtrack has a passenger terminal near the south end of the waterway and vehicles can easily access the shoreline off I-5 (via the Tacoma Spur). In addition, if visitor moorage were provided within the waterway, recreational boaters could access and utilize shoreline amenities. The deeper water at the mouth of City Waterway would be equally suitable for a ferry terminal or a cruise ship terminal. Schuster Parkway and a few locations along Ruston Way would also be suitable for a cruise ship terminal.

The large amount of vacant waterfront in the three shoreline segments makes redevelopment a possibility. If the economic forecasts are correct, there will be opportunities which could support a tourist based industry in Tacoma. As the shoreline develops with suitable points of interest and activities, the boating public and local travelers will visit the area. In addition,

given the promising outlook for international trade, it is not unreasonable to assume that Tacoma will also be playing host to foreign guests.

The successful redevelopment of the City Waterway, Schuster Parkway, Ruston Way shoreline need not depend entirely on the tourist trade. The anticipated growth in employment will increase the number of people working in Tacoma. A larger segment of the population would support and utilize the downtown area if there were attractive amenities in the urban core. A revitalized waterfront could play a major role in realizing this goal.

A vital urban environment will also attract a segment of the population wanting to live in the downtown area. It is even possible that a percentage of the commuting population discussed previously, would opt to live in the city and work elsewhere. Restoration and development of high density residential units will contribute to the support base for commercial and retail businesses. The Tacoma shoreline regulations permit multi-residential development on City Waterway. Therefore, the possibility exists for a high density urban waterfront, with mixed residential, commercial and retail uses.

Table 13. Central Puget Sound Economic Development District 1987.

Non-agricultural wage and salary employment, Pierce County (in thousands)

	1970	1975	1980	1982	1983	1984	1985	1986	% CHG 85-86	ANN AVG % CHG 70-86
TOTAL WAGE & SALARY WORKERS	105.8	116.1	141.8	140.8	141.1	151.9	157.9	163.4	3.5	2.7
Total Manufacturing	19.6	20.4	22.0	22.0	20.5	20.9	21.2	21.2	0.0	0.5
Food and Kindred Products	2.8	2.5	2.6	2.4	2.3	2.5	2.4	2.8	16.7	0.0
Lumber and Wood Products	5.2	4.7	4.7	4.2	4.5	4.4	4.2	4.5	7.1	-0.9
Furniture and Fixtures	1.0	0.9	0.7	0.6	0.6	0.6	0.5	0.6	20.0	-3.1
Paper and Allied Products	1.8	1.6	1.5	1.4	1.5	1.5	1.7	1.6	-5.9	-0.7
Chemicals and Allied Prod.	1.1	1.0	0.9	0.8	0.7	0.8	0.8	0.8	0.0	-2.0
Primary Metals	1.9	2.0	1.8	1.9	1.5	1.5	1.2	1.0	-16.7	-3.9
Fab. Metal & Mach. (Excl. Elec.)	1.1	2.1	2.0	2.9	1.9	1.6	2.4	2.4	0.0	5.0
Other Manufacturing	4.7	5.6	7.8	7.8	7.6	7.9	8.0	7.5	-6.2	3.0
Non-Manufacturing	86.2	95.7	119.8	118.8	123.4	131.8	136.7	142.2	4.0	3.2
Contract Construction	5.4	5.6	7.3	6.4	6.4	7.8	8.2	8.6	4.9	2.9
Transportation, Comm. & Util.	6.6	5.3	6.7	6.8	6.9	7.2	7.7	7.9	2.6	1.1
Wholesale & Retail Trade	23.0	27.2	32.9	33.8	35.8	37.7	39.3	41.5	5.6	3.7
Finance, Inc. & Real Estate	6.1	5.6	7.0	6.9	7.1	7.6	8.0	8.6	7.5	2.2
Services	18.0	22.1	30.6	31.8	33.9	36.2	38.4	40.0	4.2	5.1
Government	26.6	29.4	34.6	32.5	33.3	34.5	35.1	35.6	1.4	1.8
Federal	—	—	—	9.4	9.8	9.9	9.9	9.9	0.0	—

Source: Washington State Employment Security Division

Table 14. Central Puget Sound Economic Development District 1987.
Average annual employment growth (in %) 1967-1984

	King County	Kitsap County	Pierce County	Snohomish County
Total Employment	2.5	3.9	2.7	5.0
Manufacturing	-1.1	3.3	0.3	4.2
Food & Kindred Prod.	-0.3	-10.7 to -1.9	-2.0	3.7
Lumber & Wood Prod.	-0.2	-0.4	-0.5	-0.1
Paper Products	1.4	.	-2.0	-6.7 to -1.6
Printing & Publishing	2.9	3.8	1.5	8.7
Fabricated Metal	0.0	.	4.0	5.3
Machinery & Equip.	2.7	.	-2.0	-0.6
Electronic Equip.	3.9	.	.	.
Transportation Equip.	-4.0	.	1.9	18.0
Other Manufacturing	4.5	7.6-9.2	0.4-0.8	-1.4 to 0.4
Non-Manufacturing	3.7	3.9	3.2	5.3
Construction	2.6	5.4	1.3	3.0
Trans.,Comm.,& Util.	3.1	1.4	1.5	3.4
Trucking	3.3	2.3	4.5	.
Wholesale Trade	2.6	5.1	3.4	5.5
Retail Trade	3.7	5.3	3.7	6.3
Eat. & Drink. Estab.	5.9	7.8	7.1	9.5
FIRE	4.5	8.3	2.6	5.7
Banking	2.2	6.0	2.3	3.5
Oth Credit Agencies	5.6	11.6	3.1	8.1
Insur. Carriers	3.6	.	-2.0	4.9
Insur. Agents	5.3	17.2	6.4	4.5
Real Estate	4.1	7.3	2.2	6.3
Services	5.6	8.4	5.3	7.9
Hotel & Lodging	3.4	10.2	1.4	3.9
Personal Serv.	2.4	3.2	1.4	5.4
Business serv.	7.2	22.4	7.1	10.1
Misc. Bus. Serv.	5.5	.	7.1	10.2
Health	6.1	7.4	6.5	7.3
Legal	9.8	7.8	10.3	8.1
Engineer. & Arch.	5.1	.	1.2	5.6
Accounting	4.8	5.8	7.0	9.8
Government (excluding uniformed military)	2.3	2.2	1.7	3.5

Source: Industry Employment, County Business Patterns, U.S. Bureau of the Census,1967 and 1984; Government Employment, Washinton State Employment Security division; (compiled by CPSEDD)

Table 15. Carlson 1983.

Tacoma Share of Washington Employment

	1970	1975	1980	Jan 1982	Jan 1983
MANUFACTURING					
Food Products	.11	.10	.09	.08	.08
Lumber Products	.10	.08	.09	.11	.11
Paper	.10	.10	.08	.09	.09
Chemicals	.13	.16	.10	.09	.08
Primary Metals	.14	.15	.11	.15	.12
Fabricated Metal	.07	.07	.07	.11	.10
Transportation Equipment	.02	.03	.03	.04	.03
Other Manufac	.14	.12	.09	.09	.09
Total Manufac	.08	.08	.07	.08	.07
NON-MANUFACTURIN					
Agric & Forestry	.06	.08	.07	.10	.09
Construction	.11	.09	.09	.08	.08
Transport & Util	.08	.07	.06	.08	.07
Trade	.10	.11	.09	.09	.09
Finance	.11	.07	.07	.08	.08
Services & Minin	.10	.11	.10	.10	.10
Government	.10	.11	.10	.10	.10
Total	.10	.10	.09	.09	.09

Carlson 1983

Table 16. Puget Sound Council of Governments 1984b; Puget Sound Council of Governments 1987.

PSCOG EMPLOYMENT FORECASTS BY COUNTY

	1970	1980	1990	2000	2020
1984 SERIES					
TACOMA	72587	84060	91196	110168	
PIERCE COUNTY	179508	191037	217348	267321	
SNOHOMISH COUNTY	84140	119220	138417	182157	
KING COUNTY	504862	747461	858604	1062672	
KITSAP COUNTY	40999	62138	76127	92689	
TOTAL	809509	1119856	1290496	1604839	
1987 SERIES (PRELIM)					
TACOMA	68867	80109	99163	115612	146611
PIERCE COUNTY	163405	171420	215490	260375	350902
SNOHOMISH COUNTY	71515	102313	130739	177746	262882
KING COUNTY	461586	690723	867394	1052249	1428759
KITSAP COUNTY	38401	55014	71969	83112	111062
TOTAL	734907	1019470	1285592	1573482	2153605

PERCENT CHANGE

	70-80	80-90	90-2000	2000-2020
1984 SERIES				
TACOMA	15.81	8.49	20.80	
PIERCE COUNTY	6.42	13.77	22.99	
SNOHOMISH COUNTY	41.69	16.10	31.60	
KING COUNTY	48.05	14.87	23.77	
KITSAP COUNTY	51.56	22.51	21.76	
TOTAL	38.34	15.24	24.36	
1987 SERIES (PRELIM)				
TACOMA	16.32	23.79	16.59	26.81
PIERCE COUNTY	4.90	25.71	20.83	34.77
SNOHOMISH COUNTY	43.07	27.78	35.95	47.90
KING COUNTY	49.64	25.58	21.31	35.78
KITSAP COUNTY	43.26	30.82	15.48	33.63
TOTAL	38.72	26.10	22.39	36.87

Puget Sound Council of Governments 1984b
Puget Sound Council of Governments 1987

Table 17. Puget Sound Council of Governments 1986a

PERSONAL INCOME PER HOUSEHOLD

Year	King		Kitsap		Pierce		Snohomish		Region	
	Curr.$	1982$	Curr.$	1982$	Curr.$	1982$	Curr.$	1982$	Curr.$	1982$
1959	8,560	26,420	6,780	20,926	7,429	22,930	7,450	22,995	8,119	25,057
1965	10,343	28,972	8,904	24,940	8,875	24,859	8,376	23,461	9,746	27,301
1969	13,700	33,414	12,160	29,657	12,780	31,170	11,722	28,589	13,184	32,156
1970	13,848	32,281	12,595	29,358	13,341	31,098	12,118	28,247	13,460	31,376
1971	14,184	31,591	13,112	29,204	13,558	30,196	12,247	27,277	13,755	30,634
1972	15,062	32,252	14,280	30,577	13,575	29,069	12,904	27,631	14,447	30,936
1973	16,576	33,486	15,860	32,040	15,082	30,470	14,180	28,647	15,935	32,193
1974	18,144	33,110	17,575	32,071	16,284	29,716	15,377	28,060	17,386	31,726
1975	20,094	33,942	18,452	31,170	17,448	29,474	17,151	28,971	19,087	32,242
1976	22,059	35,238	19,663	31,410	18,766	29,977	18,719	29,903	20,806	33,236
1977	23,765	35,630	22,075	33,096	20,021	30,017	20,091	30,122	22,409	33,596
1978	26,265	36,683	24,470	34,177	22,122	30,897	24,178	33,768	25,010	34,931
1979	28,923	36,986	27,410	35,052	24,201	30,948	26,915	34,418	27,570	35,255
1980	31,373	36,228	28,361	32,750	25,978	29,997	28,355	32,742	29,641	34,228
1981	34,016	35,958	29,702	31,398	28,196	29,806	30,285	32,014	32,005	33,832
1982	35,449	35,449	31,578	31,578	29,566	29,566	31,239	31,239	33,379	33,379
1983	36,483	35,113	33,311	32,060	30,369	29,229	32,193	30,985	34,392	33,101
1984	38,431	35,518	34,148	31,560	31,699	29,296	33,768	31,209	36,077	33,343
1985	39,957	35,772	34,543	30,925	32,685	29,261	35,203	31,516	37,399	33,482

Notes:

1. Personal income consists of total, before tax-income received by persons from all sources during the calendar year. It differs from money income as defined by the U.S. Census Bureau by including employee fringe benefits, in-kind assistance payments, and an inventory adjustment to proprietors' income, and by excluding personal contributions to social security. Personal income is estimated from records on source of income, rather than from the reporting of individuals, as in the U.S. Census. Personal income generally tends to be somewhat higher than money income.

2. Conversion from current dollars to 1982 dollars: based on the U.S. GNP implicit price deflator for personal consumption expenditures (annual averages), from the U.S. Department of Commerce, Bureau of Economic Analysis.

Sources:

1. Personal Income for 1959-84: U.S. Dept. of Commerce, Bureau of Economic Analysis, Revised 1986. For 1985: PSCOG estimates from state level data.

2. Households (April 1): 1960, 1970 and 1980 U.S. Census, PSCOG annual estimates, and PSCOG demographic data bases.

Table 18. Puget Sound Council of Governments 1984b; Puget Sound Council of Governments 1987

PSCOG POPULATION FORECASTS BY COUNTY

	1970	1980	1990	2000	2020
1984 SERIES					
TACOMA	156665	159377	162361	169155	
PIERCE COUNTY	412344	485643	543608	635598	
SNOHOMISH COUNTY	265236	337720	400782	510227	
KING COUNTY	1159375	1269749	1387316	1638920	
KITSAP COUNTY	101732	147152	191304	228045	
TOTAL	1938687	2240264	2523010	3012790	
1987 SERIES (PRELIM)					
TACOMA	156665	159377	165703	172946	182661
PIERCE COUNTY	412344	485643	566787	667884	858089
SNOHOMISH COUNTY	265236	337720	425412	544116	784555
KING COUNTY	1159375	1269749	1463269	1703803	2125299
KITSAP COUNTY	101732	147152	185575	223036	293993
TOTAL	1938687	2240264	2641043	3138839	4061936

PERCENT CHANGE

	70-80	80-90	90-2000	2000-2020
1984 SERIES				
TACOMA	1.73	1.87	4.18	
PIERCE COUNTY	17.78	11.94	16.92	
SNOHOMISH COUNTY	27.33	18.67	27.31	
KING COUNTY	9.52	9.26	18.14	
KITSAP COUNTY	44.65	30.00	19.21	
TOTAL	15.56	12.62	19.41	
1987 SERIES (PRELIM)				
TACOMA	1.73	3.97	4.37	5.62
PIERCE COUNTY	17.78	16.71	17.84	28.48
SNOHOMISH COUNTY	27.33	25.97	27.90	44.19
KING COUNTY	9.52	15.24	16.44	24.74
KITSAP COUNTY	44.65	26.11	20.19	31.81
TOTAL	15.56	17.89	18.85	29.41

Puget Sound Council of Governments 1984b
Puget Sound Council of Governments 1987

Table 19. Puget Sound Council of Governments 1984b; Puget Sound Council of Governments 1987.

PSCOG HOUSEHOLD FORECASTS BY COUNTY

	1970	1980	1990	2000	2020
1984 SERIES					
TACOMA	54900	63588	70125	79233	
PIERCE COUNTY	123813	174232	212396	269224	
SNOHOMISH COUNTY	80895	120699	156912	215365	
KING COUNTY	391843	497263	584041	763301	
KITSAP COUNTY	32856	52809	74294	96629	
TOTAL	629407	845003	1027643	1344519	
1987 SERIES (PRELIM)					
TACOMA	54900	63588	70701	76690	87044
PIERCE COUNTY	123813	174232	217113	265186	364788
SNOHOMISH COUNTY	80895	120699	162227	214384	331246
KING COUNTY	391843	497263	605985	724610	954478
KITSAP COUNTY	32856	52809	71042	89032	127086
TOTAL	629407	845003	1056367	1293212	1777598

PERCENT CHANGE

	70-80	80-90	90-2000	2000-2020
1984 SERIES				
TACOMA	15.83	10.28	12.99	
PIERCE COUNTY	40.72	21.90	26.76	
SNOHOMISH COUNTY	49.20	30.00	37.25	
KING COUNTY	26.90	17.45	30.69	
KITSAP COUNTY	60.73	40.68	30.06	
TOTAL	34.25	21.61	30.84	
1987 SERIES (PRELIM)				
TACOMA	15.83	11.19	8.47	13.50
PIERCE COUNTY	40.72	24.61	22.14	37.56
SNOHOMISH COUNTY	49.20	34.41	32.15	54.51
KING COUNTY	26.90	21.86	19.58	31.72
KITSAP COUNTY	60.73	34.53	25.32	42.74
TOTAL	34.25	25.01	22.42	37.46

Puget Sound Council of Governments 1984b
Puget Sound Council of Governments 1987

Table 20. Puget Sound Council of Governments 1985.

PUGET SOUND 1980 WORK TRIP O/D MATRIX

WORK END OF TRIP

HOME END OF TRIP	-TOTAL-	PIERCE COUNTY	SNOHOMISH COUNTY	SEATTLE	KING CO OTHER	KITSAP COUNTY
-TOTAL-	1022881	177071	111025	373396	307764	53625
PIERCE COUNTY	198865	167180	386	8174	20680	2445
SNOHOMISH COUNTY	146309	278	93697	34524	17578	232
SEATTLE	242717	1035	5559	201765	33914	444
KING CO OTHER	372391	7277	11140	119670	233872	432
KITSAP COUNTY	62599	1301	243	9263	1720	50072

Puget Sound Council of Governments 1985

Table 21. Puget Sound Council of Governments 1985.

- DETAILED PUGET SOUND 1980 WORK TRIP O/D MATRIX

WORK-END OF TRIP

HOME-END OF TRIP	SEATTLE CBD	SEATTLE OTHER	KING CO OTHER	BREMERTON	KITSAP OTHER	TACOMA	PIERCE CO OTHER	EVERETT	SNOHOMISH CO OTHER	-TOTAL-	PIERCE COUNTY	SNOHOMISH COUNTY	SEATTLE	KITSAP COUNTY
SEATTLE CBD	1941	1587	165	14	22	53	32	24	45	3883	85	69	3528	36
SEATTLE OTHER	56778	141459	33749	228	180	677	273	2685	2805	238834	950	5490	198237	408
KING CO OTHER	36362	83308	233872	221	211	4718	2559	5705	5435	372391	7277	11140	119670	432
BREMERTON	512	829	823	12288	3698	174	22	20	29	18395	196	49	1341	15986
KITSAP OTHER	3616	4306	897	13998	20088	711	394	71	123	44204	1105	194	7922	34086
TACOMA	663	2119	5807	469	260	42981	10545	81	72	62997	53526	153	2782	729
PIERCE CO OTHER	1256	4136	14873	931	785	39566	74088	164	69	135868	113654	233	5392	1716
EVERETT	417	1211	928	6	25	2	11	14758	5293	22651	13	20051	1628	31
SNOHOMISH CO OTHER	9312	23584	16650	111	90	129	136	25169	48477	123658	265	73646	32896	201
-TOTAL-	110857	262539	307764	28266	25359	89011	88060	48677	62348	1022881	177071	111025	373396	53625
PIERCE COUNTY	1919	6255	20680	1400	1045	82547	84633	245	141	198865	167180	386	8174	2445
SNOHOMISH COUNTY	9729	24795	17578	117	115	131	147	39927	53770	146309	278	93697	34524	232
SEATTLE	58719	143046	33914	242	202	730	305	2709	2850	242717	1035	5559	201765	444
KITSAP COUNTY	4128	5135	1720	26286	23786	885	416	91	152	62599	1301	243	9263	50072

Puget Sound Council of Governments 1985

Table 22. Puget Sound Council of Governments 1986b.

JOURNEY TO WORK DATA - 1980

Persons Working in Tacoma

Area of Residence	Workers by Area of Residence		Percent of Total Work Force in Area of Residence
	Number	Percent	
Lakewood/Gig Harbor	16896	19.9	36.3
S.E. Pierce County	18544	21.8	28.6
Tacoma	40689	47.8	66.3
Federal Way/Auburn	2604	3.1	5.3
Kent/Soos Creek	1040	1.2	1.8
Burien/Tukwila/Renton	448	0.5	0.6
Issaquah East	171	0.2	0.3
Bellevue	215	0.3	0.5
Redmond/Kirkland	81	0.1	0.1
South Seattle	282	0.3	0.4
Downtown Seattle	---	---	---
Capitol Hill/Queen Anne	197	0.2	0.3
North Seattle	179	0.2	0.2
Shoreline	39	---	0.1
Lynnwood/Edmonds	45	0.1	0.1
Mill Creek/Cathcart	53	0.1	0.2
Everett	---	---	---
Marysville/Snohomish	31	---	0.1
Kitsap County	885	1.0	1.5
King County (Other)	46	0.1	1.8
Ft. Lewis	478	0.6	2.8
Pierce County (Other)	2194	2.5	25.3
Snohomish County (Other)	---	---	---
	85117	100.0	---

Source: 1980 Urban Transportation Planning Package, U.S. Bureau of the Census. Special tabulations by the Puget Sound Council of Governments.

For more information, call the PSCOG Information Center at 464-7532.

Puget Sound Council of Governments 1986b

Table 23. Puget Sound Council of Governments 1984b; Puget Sound Council of Governments 1987.

PSCOG EMPLOYMENT FORECASTS FOR TACOMA AREA

	1970	1980	1990	2000	2020
1984 SERIES					
TACOMA CBD	29622	29757	30747	35568	
TACOMA PORT/NE	15010	21657	26658	35041	
TACOMA	72587	84060	91196	110168	
PIERCE COUNTY	179508	191037	217348	267321	
1987 SERIES (PRELIM)					
TACOMA CBD	27536	27730	33731	38268	49908
TACOMA PORT/NE	14840	21390	28333	35506	48153
TACOMA	68867	80109	99163	115612	146611
PIERCE COUNTY	163405	171420	215490	260375	350902

PERCENT CHANGE

	70-80	80-90	90-2000	2000-2020
1984 SERIES				
TACOMA CBD	0.46	3.33	15.68	
TACOMA PORT/NE	44.28	23.09	31.45	
TACOMA	15.81	8.49	20.80	
PIERCE COUNTY	6.42	13.77	22.99	
1987 SERIES (PRELIM)				
TACOMA CBD	0.70	21.64	13.45	30.42
TACOMA PORT/NE	44.14	32.46	25.32	35.62
TACOMA	16.32	23.79	16.59	26.81
PIERCE COUNTY	4.90	25.71	20.83	34.77

Puget Sound Council of Governments 1984b
Puget Sound Council of Governments 1987

Section VII:
Conclusion

SECTION VII

CONCLUSIONS

The Ruston Way, Schuster Parkway, City Waterway shoreline is in transition. It was once the center of Tacoma's industrial and shipping activity, but has slowly relinquished this role to the Port of Tacoma. Today the City has the opportunity to make this shoreline a unique part of the downtown urban environment.

THE VISION FOR DEVELOPMENT ON RUSTON WAY, SCHUSTER PARKWAY AND CITY WATERWAY

The City of Tacoma has a vision for the shoreline stretching from the Town of Ruston to City Waterway. In the Generalized Land Use Plan, Ruston Way is seen as an area appropriate for low, medium and high intensity development. The high intensity area only applies to the ASARCO property. South of ASARCO, pockets of low and medium intensity uses alternate, ending with a medium intensity area next to the Schuster Parkway segment. The Shoreline Master Program, Ruston Way Plan and the Westside Plan recognize the high intensity, industrial use of the ASARCO property. Industrial uses are prohibited on Ruston Way south of ASARCO. The plans call for mixed public and commercial development of the area, with the emphasis is on uses that promote public enjoyment of the waterfront.

The Generalized Land Use Plan considers the Schuster Parkway segment appropriate for high intensity development. The deep water available immediately offshore served Tacoma's maritime interests well in the past, and it continues to be a shoreline in demand by activities which require deep draft moorage. The Shoreline Master Program and the North End Plan recognize the potential of the Schuster Parkway segment for water-dependent and water-related uses. To this end, water-dependent and water-related industrial and commercial development can be permitted as well as nonwater-dependent uses (on available uplands).

City Waterway is also considered a high intensity area in the Generalized Land Use Plan. Unlike Schuster Parkway, City Waterway is seen as an extension of downtown Tacoma, used intensively by non-industrial, people oriented uses. The Shoreline Master Program and the Central Business District Plan encourage the revitalization of City Waterway with mixed public and private activities, including commercial and multi-residential developments.

The goals set out in these plans have not been fully realized.

PRESENT DEVELOPMENT ON RUSTON WAY, SCHUSTER PARKWAY AND CITY WATERWAY

A number of parks and restaurants have been constructed on Ruston Way, but other commercial developments (whether water-dependent, water-related or nonwater-dependent) have not located on this shoreline. In fact, more than 50 percent of the Ruston Way shoreline is vacant.

Over half the available waterfront acreage on Schuster Parkway is also vacant. Since the closure of Tacoma Boat Builders, the grain elevator remains the one major industrial use on this waterfront. No one has applied for an industrial use permit to locate on Schuster Parkway, and the only demand for a shoreline location has come from parties interested in mooring large vessels. Commercial, nonwater-dependent uses have not located along this shoreline either. Both an office complex and a large hotel were approved for development, but neither project was actually carried out.

Of the three shoreline segments, City Waterway has been the least successful in realizing goals envisioned by applicable plans. Except for marinas, which have proved to be an unqualified success, only a few other anticipated uses have chosen to locate in City Waterway. These include a restaurant, a multiple use professional office complex, and a city park. City Waterway is otherwise characterized by nonwater-dependent industrial and commercial uses, and a growing number of vacant properties.

Several factors are responsible for the development patterns and trends on the Ruston Way, Schuster Parkway, and City Waterway shorelines. Some of these influences affect all three shoreline segments. Some are characteristic of one shoreline but not the others.

General Factors Influencing Development

One factor that has affected development along all three shorelines is the success of the Port of Tacoma. The Port area has proven to be more suitable for many industrial and commercial water-dependent and water-related uses than the shoreline between Pt. Defiance and City Waterway. By being able to meet the needs of modern industry, the Port has managed to attract most of the industrial and commercial maritime activity to the waterways and uplands under its jurisdiction. The grain elevator (owned and operated by the Port) and the berthing of large vessels are two exceptions along Schuster Parkway, as are the marinas and recreational boating facilities in City Waterway.

Another factor affecting development along all three shorelines has been the economic down-swing for resource-based industries, retail sales, and commercial services in the Tacoma-Pierce County area. Many resource-based industries (lumber mills, flour mills, foundries, smelters, coal bunkers, etc.) either receive or deliver goods by ship or barge. The decline in these interests resulted in closures and reduced demand for waterfront locations. If the economy had been strong in the retail sales and commercial services sectors, some of these types of developments might have shown an interest in locating on available shoreline properties. Instead, such development has been slow to occur and many suitable areas remain vacant.

Specific Factors Influencing Development

It is difficult to say to what degree the Port of Tacoma and economic forces have been responsible for the type of development or lack of development on Ruston Way, Schuster Parkway, and City Waterway. The issues are complicated by a number of additional influences that affect individual shoreline segments.

Ruston Way On Ruston Way, industrial use (south of ASARCO) and residential use has not occurred because these activities are prohibited by the Master Shoreline Master Program. However, with the exception of restaurants, the wide range of commercial activity which could be approved under the shoreline regulations has not been proposed.

For some properties along Ruston Way, the lack of commercial development may be attributable to the limited amount of associated uplands. In order for a project to locate along the waterfront, the site must accommodate both the structure and associated parking. If there is not enough dry land, then the only remedy is landfill or over-the-water, piling construction. The Master Program is quite specific in this regard. It only permits landfilling or development on piling for water-dependent or water-related uses. Therefore, nonwater-dependent commercial activities have difficulty meeting siting requirements, because all aspects of the project must be confined to upland areas.

Landfilling and over-the-water construction are methods for overcoming the dry land limitations of Ruston Way, at least for commercial water-dependent and water-related uses. However, the Ruston Way shoreline is not really an appropriate location for many water-dependent and water-related uses. For example, Ruston Way is directly exposed to storms from the north, which make the area less suitable for uses like marinas.

In fact, during the years when industrial uses and shipping interests competed for prime locations within City Waterway, marinas and small vessel moorage occupied less suitable areas along Ruston Way. However, as waterfront industries declined, marinas gradually moved into City Waterway, eventually becoming the dominant use of this shoreline segment. Today there are no longer any recreational boating facilities along Ruston Way.

The only water-related activities which have successfully located on Ruston Way are those that provide an opportunity for a substantial number of people to enjoy the shoreline such as fall parks and restaurants. Since these uses

are defined as water-related in the Tacoma Shoreline Master Program, landfilling and over-the-water construction could be approved. In fact all the restaurants presently located on Ruston Way are built on piling.

The ASARCO property is the one area along Ruston Way approved for industrial as well as commercial use with enough upland area to accommodate large developments without landfill or piling construction. The problem for future development of this site is contamination from past industrial practices. Presently the site is part of a Superfund clean-up effort, and it is not known when the site will be stabilized or what the owners plan to do once the environmental issues are resolved.

Schuster Parkway The impact of the influence of the Port of Tacoma and economic factors affecting the City as a whole are evident along Schuster Parkway. On this shoreline, a major shipyard recently discontinued operations, and a large warehouse complex no longer stores goods delivered by ship or barge. In addition, two major nonwater-dependent commercial developments (a hotel and an office complex), were approved by city officials, but never constructed.

Nevertheless, Schuster Parkway remains a possibility for water-dependent and water-related developments because of the deep-draft moorage available immediately offshore. The grain elevator, operated by the Port of Tacoma, is a prominent feature on Schuster Parkway and the only example of how this shoreline continues to retain its identity as a working waterfront. The Schuster Parkway shoreline has also been in demand recently by interests seeking to berth large vessels in the area.

Proposals to berth large vessels along Schuster Parkway have been opposed by upland residents who are concerned with impacts to their views of Commencement Bay. This issue highlights one of the major drawbacks to development of the shoreline along Schuster Parkway, namely the inherent incompatibilities in having an industrial/commercial area adjacent to a residential neighborhood. In fact, unless acceptable mitigation can be provided, a wide-range of water-dependent and water-related uses would

probably not be suitable, such as water-related manufacturing, shipbuilding, fish processing, and cargo terminals.

Even without the compatibility issue, there are other development constraints affecting the future development of Schuster Parkway. As with Ruston Way, the direct exposure to storms out of the north make Schuster Parkway a less than ideal location for uses involving small vessels. In addition, there are limited uplands associated with the shoreline in this area imposing some of the same constraints encountered on Ruston Way.

City Waterway Reasons for the increasing vacancy rate in City Waterway and the lack of investor interest is not entirely the result of industry preference for the Port area or a less than supportive economic situation. Existing city plans envision a vital urban waterfront along City Waterway, where people live, work, and play. For these plans to be realized, it would be necessary for a number of industrial uses (many of which are nonwater-dependent) to relocate to upland sites. This process has been slow, and the waterway currently retains much of its industrial character.

The transition from industrial to mixed public and commercial development is difficult because existing industrial uses deter the redevelopment of properties which do become vacant. Vacant properties and abandoned buildings, only add to the perception that the area is not suitable for residential and commercial retail development. The result is a long transition period during which little progress has been made toward community goals.

One factor that could be seriously affecting investor interest in City Waterway is the possibility of soils contamination from past industrial activities. Given the long history of industrial use, it is probable that expensive clean-up operations may be required on some sites before development can take place. Environmental regulations state that the party responsible for the problem must bear the cost of remediation. However, it is not always possible to identify the source or the perpetrator of a pollutant. In such cases it may be years before public monies are available for required cleanup.

Another factor that is probably inhibiting the redevelopment of City Waterway is its isolation from the downtown central business district. In spite of the proximity of the two areas, high bluffs and transportation corridors prevent pedestrians from moving easily between them. Impediments to pedestrian movement pose a major disincentive for commercial redevelopment of City Waterway. Businesses on City Waterway cannot presently rely on shoppers from the central downtown area.

FUTURE DEVELOPMENT OF RUSTON WAY, SCHUSTER PARKWAY AND CITY WATERWAY

On the one hand, Ruston Way has become the urban waterfront envisioned by the Master Program. It is a showcase for public amenities and a number of fine restaurants have located along its shores. Schuster Parkway also supports activities which coincide with planning goals. As an urban shoreline designated for port industrial deep-water use, it now supports a grain elevator and large vessel moorage. Even City Waterway, although slow to redevelop, is gradually moving away from its industrial past toward the goal of a people-oriented downtown waterfront.

On the other hand, except for restaurants, few commercial uses have been able to locate on Ruston Way and a number of suitable sites remain undeveloped. Schuster Parkway may support large vessel moorage, but it has been the cause of citizen discontent, and it will continue to be a source of controversy. The problems confronting City Waterway can be expected to continue to slow development, and in some cases bring it to a complete halt.

It is time to step back and look at the goals set out in the planning documents. It is also time to ask the following questions.

I. Has a proper balance been struck on Ruston Way, between publicly and privately held land?

   o Should the city acquire more property?

- Should a wider range of commercial uses be encouraged to locate on Ruston Way, and, if so, what must be changed in the Master Program regulations to encourage and allow for such uses?

- Should residential uses be permitted on Ruston Way, and if so what must be changed in the Master Program to allow for such uses?

II. Is Schuster Parkway an appropriate location for industrial, deep water uses?

- Should industrial uses be allowed on Schuster Parkway, and if so, under what conditions?

- Should deep-draft moorage be allowed on Schuster Parkway, and if so, under what conditions?

III. What must be done to spur the redevelopment of City Waterway?

- How can the overall appearance of City Waterway be improved?

- What kind of organization and commitments are necessary to address the pollution issues of properties on City Waterway?

- What can be done to improve the connections between City Waterway and the downtown central business district?

Phase II will discuss these questions and provide recommended courses of action. It will also present the findings of a series of interviews which were conducted to determine what members of the public perceive as problems and solutions. Together Phase I and Phase II will be introduced into the public process for discussion and review. It is intended that these two documents will provide the information and analyses needed to assist the

public in making long term decisions affecting Ruston Way, Schuster Parkway and City Waterway.

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